# THE TRANSFORMATION OF PUBLIC HOUSING PROVISION IN EGYPT AND THE ROLE OF SELF HELP

HALA SAAD KARDASH



A Thesis Submitted to the School of Architecture, Faculty of Environmental and Social Sciences, University of Newcastle upon Tyne,U.K in Fulfilment for the Degree of Doctor of Philosophy in Architecture.

JANUARY

1993

# AKNOWLEDGEMENTS

At the outset my gratitude goes to Nicholas Wilkinson for his academic guidance and advice; to the patience in discussion and above all the direction which he has given to my research.

CARDO staff members whose thought, interest and practical suggestions over the last three years have contributed enormously to my research efforts.

The British Council who have sponsored my overall programme of Post Graduate studies at CARDO, in particular Peter LLewelwyn (Cairo) who originally had the vision and the reality to support my initial application and subsequent transfer to PhD studies. Sylvia Dixon, ( Newcastle ) for her supportive advice and handling of my Scholarship in the UK.

The General Organisation for Housing, Planning and Building Research (Cairo) in particular to Dr.Magda Metwally for her guidance and advice during my in-country period of research on field work and data collection. Also to Dr. Hamed Fahmy for his support to my scholarship programme. I am also indebted to Dr. Noha Fahmy ( The National Centre for Social and Criminological Research ) who allowed me access to data on the social and economic backgrounds of households in The Tenth of Ramadan New City.

To Kathleen Haldane for her support and friendship when I needed it.

Finally to my parents for their continued and devoted support and whose help and understanding have contributed enourmously to the completion of the research.

# ABSTRACT

Egypt faces a great challenge in relation to the provision of housing for its urban poor. Not only has the right formula to be found of how to satisy the escalating demand, both in terms of quantity and quality, but also of where to locate such housing. The New Cities and Settlements in the desert seem to be the only option left in order to combat the continuous loss of the agricultural land to the expanding existing urban centres.

The New Cities however, initiated in the late 70's, failed to attract the low income groups of settlers. This was mainly due to the lack of affordable housing for such groups. Whilst thousands of finished residential units remain unoccupied, the workers employed in some of the New Cities' factories are commuting on a daily basis to and from the closest urban or agricultural centres near Cairo.

This research argues that aided self-help and user interventions in general could offer an appropriate answer. When most of the New Cities and Settlements were planned many self-help schemes were proposed but were frequently abandoned in favour of the conventional medium rise mass housing approach. Little or no research has been carried out to evaluate the very few schemes which were implemented. The decision to cancel self-help schemes was entirely political and seemed to stem from the governments fear of the creation of sub-standard and poor image built environments within the New Cities.

The research based its defence on projects which allow user interventions and participation in two Case Studies. The first concerns multi-storey extensions informally built by the residents in 5 storey walk-up public housing flats located in Helwan and El Tebeen. The second deals with a core housing project located in The Tenth of Ramadan, one of the New Cities.

The multi-storey extensions of Helwan and El Tebeen provided clear evidence on the potentialities and capabilities of low income users working and living in positive and supportive circumstances. The Tenth of Ramadan Core Housing Scheme provides explicit and substantiated proof of the benefits of self-help and user intervention approaches, in contrast to the views of the Government and Local Authority who condemn the process as negative development leading to a lowering of standards and poor quality environments.

The research argues that self-help has succeeded where the mass housing approach has failed.The involvement of the household and community group are seen as integral decison makers in the planning and design process. The user's efforts to transform and consolidate their housing requirements should be appreciated and encouraged and to achieve this the research concludes that a review of management and design procedures would be the first step towards achieving this aim.

# CONTENTS

page.

page.

page.

---

C H A P T E R  7

---

page.

---

PART 3.

---

CHAPTER 8.

---

LIST OF FIGURES.

LIST OF TABLES.

# INTRODUCTION

1. Research Aims.

2. Study Hypothesis.

3. Research Methodology.

4. Background to the Case Studies.

# INTRODUCTION.

## 1. Research aims.

Since the late 70's the majority of the aided self-help schemes in Egypt's New City Settlements have been replaced by conventional government public housing projects in the form of multi-storey walk-up flats. Very few aided self-help projects have been allowed to continue. The general prevailing political view is that self-help is not appropriate for low income Egyptian people. The projects which did continue still suffer major delays and hold-ups because of the housing authority's view that such approaches lead to failure and poor quality.

The main aim of this study is to find out what solid grounds and arguments there were to base such judgements on. There has been no attempt in the Egyptian context to comprehensively evaluate this experience. No investigation has been made to find out the underlying causes of the action taken to withdraw from such approaches. Also no evaluation has been made to assess the impact of aided self-help, especially in the projects which did go ahead and to see what the positive and negative aspects actually are within the Egyptian context.

The researcher's point of view is that the official verdict of failure is based on political whim and partiality to sacrifice long term benefits for more immediate prestigious gains.

The central thrust and hypothetical base for this study is that aided self-help could be a very successful form of housing provision for low income people in the New City Settlements and if adequately designed, managed and administered. Then aided self-help could act as a very sound proposal to encourage people to settle in the New Cities.

At the present time the New City Settlement programmes face many problems in attracting low income earners to move out from Cairo and other existing centres mainly from the point of view of affordability and type of housing provision. This negative trend is seen as reversible if aided self-help could be encouraged and seen as a long term process of social, economic and cultural development.

This research relies on two case studies. The first is based on the informal multi-storey extensions of government housing as proof of the potential forces which low income household have to extend and develop their physical, social, economic and cultural environment in what was originally a formal government housing project with no positive conditions provided for self help approaches.

The second case study is based on an aided self help scheme ( The Tenth of Ramadan Core Housing Scheme) in which the efforts of the users were negatively received even though the project was provided with positive conditions, to begin with, and was planned to strengthen the potentialities of the users through intended self-build approaches.

The first case study of user transformation of multi-storey public housing provided the background and evidence of the user's ability to positively contribute to the betterment of living conditions and quality of housing.

The phenonemon of user transformation of public housing takes a striking and rather unique form whereby residents living in two roomed flats in 5 storey walk up blocks manage to collaboratively construct multi-storey extensions.

This condition represents a form of multi- storey core housing. The original built area consists of about 35 sq.metres of habitable space. However the extension activites are informal and illegal because they were not initially intended or planned for in the project design. However in spite of the physical and legal difficulties which the residents faced they managed to achieve unmistakably sound results. The extensions have undoubtedly given measurable improvements to the inhabitants living conditions.

## 2. Study Hypotheses.

Two questions underly the four study hypotheses. The first relates to the multi-storey case of extension activity in which we ask why, when the users were operating against the odds, they were able to produce clear evidence of their own potentialities to better their living conditions and quality of housing.

The second question relates to the efforts of users in the Tenth of Ramadan core housing scheme, who, in the course of the project found that their efforts were negatively received, bearing in mind that they were supposedly provided with positive conditions initially to strengthen user inputs.

### Study hypotheses.

1. The residents of public housing schemes who manage to construct multi-storey extensions were operating through supportive political and socio-economic circumstances which help strengthen their skills, capabilities and potentialities.

2. In aided self-help schemes such as the Tenth of Ramdan Core Housing project, residents are confronted with restricting circumstances which discourage them from fully developing their skills and potentialities and making the most out of the available resources.

3. The Egyptian authorities judgement of the failure of aided self-help schemes - relying on the Tenth of Ramadan Core Housing experience - have overlooked many of the positive achievements and contributions of the users due to the lack of any comprehensive evaluation. The judgement of the Authorities is mainly based on superficial values of appearance and a conformance to formality and uniformity.

4. A great deal of the deficiencies and negative outcomes of the few aided self-help projects which have been implemented are due to the poor designs of the physical plan and of the initial core house provision as well as the lack of an appropriate and comprehensive management and development plan for such projects.

## 3. Research Methodology.

This research is composed of three parts. The first consists of a theoretical background to the study looking at ideas and thought behind user participation. Also in this part there is a brief introduction to the parameters of Egyptian housing policy. Part one consists of chapters one and two.

The second part is an empirical one concerning field work. Two case studies were used to draw up the evidence and are presented in chapters three to seven.

The third part of the research is concerned with the conclusions and implications of the study. This is

presented in chapter eight.

The research methodology has not been given a separate chapter because of the differing nature of the case studies themselves, but has been described in relation to each of the case studies in Chapters 3 and 5.

## 4. Background to the Case Studies.

The two case studies have different functions and together they form a complete picture in portraying the case of the successes and failures in self help projects.The first case study provides the contextual justification for the second and more extensive case study. Case Study One deals with the users informal transformation in three projects; Helwan Economic Housing, El Tebeen Marrazik and Imbaba Nasser public housing. These three projects are all are 5 storey walk-up flats situated in Cairo which have been extended from the initial provision of 25, 35, or 43 sq.metres to up to 70 sq.metres. The extensions add one, two or three more rooms and/or large balconies. The extensions were neither intended nor planned for in the original project yet resulted in a reasonable standard of construction and finishes.

The second and larger case study concerns the transformations in a core housing scheme where user inputs were intended and planned for along predetermined lines. The results of the transformation by the residents were very different from the prescribed government requirements. The

project selected for this case study is the Tenth of Ramadan Core Housing Scheme.The abbreviation used in the rest of this study is to be TORCHS. TORCHS is a core houising scheme in one of Egypt's New Cities, The Tenth of Ramadan. Although a small scheme of 502 plots it had and still has a considerable influence and significance to Egyptian housing policy .

TORCHS was the first and almost the only core housing scheme to be built in a New City for housing low income settlers. This project was often used by the policy makers to provide evidence for their presumed assumptions that such projects would only create unwanted planned slums within the New Cities.

Because of the different purposes of the two case studies the reseach methods and analysis have been presented separately at the beginning of Chapters three and five.

The purpose of the first case study is to understand the organisational framework behind the informal extension process. The purpose of the second case study is to evaluate the aided self help project as a whole and to understand the componments of the user decision making process. The first case study depends mainly on qualitative research methods whilst the second depends on both qualitative and quantitative methods.

PART 1

# CHAPTER 1

## Development within Development

1.0 Development within Development.

1.1 The Decision Making Process

1.2 Dwelling Transformation versus User Self Adjustment.

1.3 Schools of Thought; Incorporating Users in the Decision Making Process.

1.4 Understanding Quality in the Context of Choice.

1.5 Summary.

CHAPTER 1

---

## 1.0 DEVELOPMENT WITHIN DEVELOPMENT.

The process of user transformation of their housing, whether this process is informal as in the case of users modification of public housing or formal as in the case of aided self- help schemes, it implies the involvement of two main actors, the government and the beneficiaries.

The governement is represented by various departments under the local authority. The users are tenant households and in some cases owners acting separately or in groups of households. The division of responsibilities among the two main actors varies from one case to another and so does the quality of the modified or transformed housing environment.

### Development within Development in aided self-help.

In aided self-help schemes the responsible authorities, have to make certain assumptions and estimations of when and how users inputs are going to take place.

The pattern of user - government involvement and the division of responsibilities among these two parties shape the limits of the user's freedom of choice. Furthermore it dominates the users decision making process. Ultimately it affects the quality of the built environment. Maintaining strict controls over housing projects in order to avoid illegal building activites does not necessarily lead to eliminating such activites. Building transformations will still be performed by the users who are trying to create more suitable dwelling environments which could answer individual needs and specific way of life. What will be affected will be the type and scale of activites as well as the time when they are carried out.

Of course if the local authorities presence is continuous and the measures they take are so severe they might succeed in eliminating transformation activites. However the costs required for such policing are beyond the abilities of such housing authorities. The greater the mismatch between what is provided and what is needed the stronger is the user's urge to change the environment and thus the more difficult it is to control.

The success or failure of such schemes would be measured according to pre-determined criteria, which describe the standards as well as the rate of development expected from user inputs. Any deviation from the prototypes of house plan and rate of development is regarded as a negative result.

The authorities are always in fear that the results will be of a poor quality which would make the authority look as if they were producing slums; for this reason standards have to be imposed.

On the one hand self help schemes may have very controlled structures of operation not only pre-determining the plan but also the materials and method of construction which pre-determine the quality required, to the extent that the benefits of self-help and self-determination are almost lost.

On the other hand self-help schemes could have very loose organisational structures with undefined objectives - or mis-defined ones - to such an extent that both sides loose out through poor general management and organisation generally resulting in poor houses and environmentaly quality.

**Development within Development in Public Housing.**

In public housing projects where the house or flat is completed with internal walls, doors, kitchen and bathroom fittings and is then subsequently expanded through the occupants own extensions and building additions, the resulting modifications are generally regarded as negative outcomes and are strongly disliked by the authorities. The phenomenon of user transforations of public housing is a world wide one and certainly not confined to the Egyptian context ( Tipple et al, 1991.)

The amount of control exercised by the responsible authorities in order to prevent such actions by the users is a highly political issue and at the same time a very doctrinaire point of view. Such building activities usually have an informal and makeshift image attached to them. The extent to which the authorities would allow such informality and visual disorder to take place depends on many factors.

The most important of these are: the power of the local authority in question: the costs which have to be paid to control such activities, such as the cost of demolition; the time involved of the local authority staff to engage themselves in "policing" such informal activities.

In addition there are political factors concerned with the fear of social unrest and demonstrations. Also there is the question of the authority's will and manpower to maintain the standardised and formal image of the project.

Generally speaking low income public housing projects as well as self help aided projects are accomplishements which governments like to show off as a proof of their interest in serving the poor. In most cases governments prefer to avoid such informal images attached to their low income housing efforts. Finding a balance between government and user inputs into public housing is a crucial matter.

**Evaluating development within development.**

In studying the spontaneous development of informal settlements problems of distinguishing between les raisons d'etre and outcomes are often confronted by researchers. Similar difficulties could be expected in following up the development process initiated by users while modifying, transforming or extending their dwellings. Such problems are due to the complex nature of the relationship between the criteria which users base their choice on, on the one hand and their actual choices on the other.

People are continuously making choices concerning the way they live. Even when the constraints limiting such choices seem to be very dominant, some options always seem to emerge although the choices themselves may have been distorted and do not necessarily reflect people preferences. ( Rappoport 1989 ).

The time factor is also extremely important when trying to understand or analyse peoples choice. It is essential to aknowledge at which point of time people are actually basing their choices and preferences ( Michelson, 1980 ).

The issue of freedom of choice is particularly relevant to users who are adapting their environment. Basically they start off from a given situation with one or more types of constraints. Then they have to operate through the constraints in order to create another situation or

environment which is more suitable to their requirements of their way of life and work.

## 1.1 The Decision Making Process.

How people actually reach decisions is a question that has received much attention from researchers from different backgrounds and through looking at different contexts. The need to understand the decision making process is essential for all types of policy makers. For example understanding housing choice and the criteria which people employ to decide on where and how they live is very important for anyone trying to formulate a comprehensive housing policy.

In the course of making decisions people weigh up the probable gains versus losses or costs versus benefits. However the outcomes are not evaluated exactly as absolute losses or gains but as relative losses and gains. The expected losses and gains influence decisions in direct but not exact proportion to their ( subjective ) probability. This because people have different reference points against which they weigh up the expected outcomes. ( Kahneman and Tversky, 1979,and Plight 1988.) The position of such points is influenced by different factors. These factors could be considered as biases or system errors. Among those factors the following can be mentioned:

1. The availability of information about the outcomes; people tend to judge an outcome as being more probable to the extent that it is more easily pictured or recalled.

2. The representativeness; because of the familiarity with a particular choice of having a positive outcome people tend to over-rate this choice representativeness or it appears as " typical ". Hence they disregard a wide range of positive but less familiar options.

3. Commitment and group thinking are two among other factors which might influence the effectiveness of decision-making. An established commitment towards a certain situation or subject makes it likely for the individual to play down the negative aspects of the initial decision and hence make it less likely that this decision would be reversed. The group thinking is concerned with social pressures which influence the decision making process, usually resulting in the avoidance of disagreement.

Throughout this study there will be an attempt to acknowledge all the factors which influence the users decision making process. Not only those factors which have an obvious and systematic influence on the process but also those which are less obvious and less systematic and perhaps more complicated will be acknowledged as well.

## 1.2 Dwelling Transformation versus User Self Adjustment.

" When users are denied the freedom to choose the environment which they perceive to be suitable for their way of life and work,problems of an environmental nature arise." (Rapoport,1980, pp121).

Clearly, poorer users are more likely to suffer from lack of freedom to choose, being presented with very limited alternatives.

When people are forced to live in unsuitable environments they are faced with two options; either to try to adapt the environment in order to make it more receptive to their requirements or to adapt themselves to be able to carry out their activites as best they can within the given constraints.

In the latter case of adapting themselves some aspects of their behaviour as well as their expectations would have to be modified. This in turn is very likely to affect the criteria people employ for quality when evaluating environments. The user often has to modify his or her choice criteria and replace them with more realistic ones that correspond better to the actual limitations. How much do people have to change in themselves and how far can they actually change the built environment ? The results are always a compromise which vary from one case to another .

However one of the measurable outputs of change in this context is the users own input in the extensions. additions, demolitions, rebuilding and adaption to the dwelling and the environment containing it.The extent of self adaption which people themselves have to undergo through re-adjustment of their life style and mode of life reflects the rigidity of the built environment and the systems controlling it.

In typical public housing in Egypt users often have to introduce changes into their dwellings in order to lessen the level of incompatabilty between the dwelling they live in and their particular requirements.

However one must be extremely careful in accepting the transformations introduced by the users as direct indicators for either their needs, preferences or potentialities.

It is crucial to put the choices made by the users when transforming their dwelling and their environments into thier context before accepting them as indicators for users needs and preferences.

It is important to investigate how much freedom did users actually have. This is a fundamental factor in determining their goals and hence the form and significance of their intervention.

The attitude of the government or the responsible authorities is likely to be the strongest variable constraining the freedom of the user to make choices or to take action in any form whatsoever.

Another important factor is the design of the initial provision and the amount of space it allows for the degree of choice in terms of materials, structure and space which allows the modification process to take place.

Sometimes housing controls are so rigid as to preclude the alteration of the position of a door or the shifting of a partition wall. Another common example is the modification of the balcony areas, for either provision of more living space or for the increase of privacy levels, could be completely prohibited and firmly controlled by the authorities. This is very explicit in the case of some of the new cities in Egypt.

On the other hand in other housing projects users have got away with introducing quite drastic transformations of dwellings and building blocks through the building of multi-storey extensions even though the same building and planning regulations apply generally.

While users action and in-put to transform standard public housing is regarded as unplanned , as in the case of many multi-storey walk-up flats in Cairo, there are also many cases of schemes where the input of the user is planned for as in the aided self-help schemes .

Although the two processes take place within a different legal and organizational contexts they are both similar in that users inputs have taken place against a background of physical, financial and organisational provision by the government .This in turn, influences the type and the extent of the limitations or constraints users will have to work through when introducing their inputs to modify their housing .

Whether walk-up flats or aided self-help schemes the two types of users interventions provide a good chance for studying the different constraints which influence users inputs both positively and negatively. The opportunity is also providied to study their impact on the resulting quality of environment . The opportunity is also afforded in the same type of interventions to see how the different sets of limitations affect user choice and the quality of the resulting environment.

## 1.3 SCHOOLS OF THOUGHT: incorporating users in the decision making process.

When it was finally accepted that users needs, desires and requirements should represent the main stimulus in the creation of built environments the involvement of users in the decision making process became an inevitable measure. This policy has found general acceptance to lesser and greater degrees in various projects and a different parts of the world. The common denominators have been economic and qualitative in nature especially in the creation of places to live and work .

"Clearly then, the effects of quality of place depends both on the contexts in which they are and the people involved " (Canter, 1977, pp 98).

Involving the users in the provision of the residential environment was seen as a way of maintaining some degree of users satisfaction in the quality of environment.

It was in the mid-sixties when new ideas about

housing delivery systems designed for low income groups started to gather momentum around the concept of user participation. The implications of this were new roles for all parties involved in the housing process. Users and professionals, notwithstanding the role of government, were required to re-address the way in which they worked and the nature of the proposals which they produced. The quality of life in mass housing diminished in inverse proportion to the amount of professional input and public money invested in them.Large scale environments were produced, known as " concrete jungles", faceless, in which the human scale was lost and finally the projects were demolished. (Kellett 1987).

The person was unable to help him or herself and thus as people lost interest in what was supposedly being done for them so did the policy makers gradually begin to see, literally with their own eyes, that what had been seen as ideal homes were in fact counter-productive to the sort of life and quality of environment that people wanted.

Quality in the built environment could be stated as a function of a number of social and economic factors related to giving people an interest in their domestic affairs. A new way of thinking was gradually brought about by the realisation that the environments and domains of habitation which the professionals produced were not appropriate to the ways in which low income households worked and lived.

A shift of focus took place from product to process in an attempt to understand the requirements of the people and to meet them. In the developed countries of the West the case was how do people participate in the professionals process whilst in less developed countries of the world the problem was the reverse, of how do professionals participate in the peoples housing process.

Ironically and some twenty years later the problems have to some extent been reversed; many ( not all ) less developed countries have adopted the rigid mass housing approach to government housing whilst in Europe and in particular in the UK a new urban poor have emerged as a homeless group due to inadequate policies to cope with unemployement and inflation .

However the search for a better deal for the less fortunate and more vulnerable low income group has led to a number of successes. The Sri Lankan Million Houses Programme, the KIP projects for Kampong Development in Indonesia, are some examples.

These few successful projects are based on the involvement of the user in the decision making processes as well as the actual building process. Although the participation issue was dealt with through different design, constructional, financial and management philosophies the goal was always the same; to involve the user in the decision making process.

The advocacy for such new ideas was basically encouraged by the fact that the majority of low income groups actually build their own homes and plan their environments in countless number of squatter settlements throughout all less developed countries. Usually they had a reliance on their own resources and trusted their own instincts. ( Mangin and Turner 1966 )and (Mangin 1967).Such informal squatter settlements or slums which were seen as unhealthy environments breeding social and political unrest,were usually being replaced by large government housing schemes designed by professionals, commissioned by large consortia of interests such as HUD in the United States and YDG in the UK. The brave new environments failed to illuminate the real cause of unrest but instead added to them in their ignorance of the demands and interests of the urban poor to build to and belong to the world they live in. (Newman,1972), (Turner 1976) and (Coleman,1975).

Turner occupies himself with the quality of life that the squatter settlements offered to their settlers. At this time squatter settlements were described as "supportive" environments as opposed to the repressive governemnt built mass housing projects which were very wasteful of precious resources. Turner quotes Churchill by saying never did so many do so much with so little and when he came to see what modern mass housing was really like he felt confident in saying that never in the history of housing was so little done with so much. (Turner J 1978).

To a large extent these views led to the principles of self-help housing. Upgrading and sites and service schemes represented the main thrust of this approach.

For Turner the "enabling" concept was put forward as the role for the professional as well as for the government. Enabling people to help themselves allowing them to move within a framework of supportive rules and guidelines.

However the ideology of self-help has generated agreat deal of critizism and doubts concernig their political and social impliacations. They were suspected of encouarging the growth of speculative sectors , widing the gap between the poor and the rich as well as increasing the exploitation ofthe labour of the poor.

Another major contributor to the participation debate was John Habraken. Habraken's concept was based on a broad division of responsibilites defining clear roles for the professional and the user. On the one hand the context for participation was to be provided by the physical framework for people to act in and make homes; dwelling for Habraken was the act of deciding and doing by users. His thesis was that governments, just as they thought in the 60's that they had a last solved the housing problem through using prefabrication methods, had in fact got it all wrong, the user had been excluded from the process. (Habraken, 1972 ).

It was not the method itself that was wrong but that the method, excluded the user from any part in the decision making process. To counter balance this, Habraken's proposal was to introduce the support and infill concept. A housing delivery system which only worked if the user made decisions about the type and layout of his or her dwelling. Dwellings could only be called dwellings if they were the result of user involvement and the natural relationship. (Habraken,1972). The idea in itself was brilliant but allowed to float in the market of costs, it had more to do with the middle class affluence and issues of affordability than with the solution to low income mass housing. It crossed also the boundaries of rent and ownership issues on the cost basis. It was very difficult to build multi-storey structures and to allow people to " knock up " their own house at a cost which would come anywhere near the price at which the building agency itself could complete the scheme into 500, 750 or 1000 "homes ". Most support projects went into large compromise solutions with the building agency owning everything but allowing tenants to decide on their own floor plans.

To some extent Habraken's ideas have succeeded in the full in so far as they have contributed to many changes in views and policies concerning professional and user roles in the housing process. However the original challenge of multi-storey occupation in the rented low cost sector with "owned" choice of plan and finishes still remains.

Meanwhile there was a growing awareness of the relationship between culture, in the widest meaning of the word, and the form of the built environment.Rapport saw culture as the main determinant of form and considered environments to be supportive to the users as much as they respect and emerge through the core values of their cultures. (Rapoport 1983).

Still searching within the field of environment and behaviour Christopher Alexander introduced a new way of understanding the appropriatness of environments. Alexander saw the place as a pattern of events. The most successful forms for him are those which acknowledge the existing re-occuring patterns of events. Hence the designer should use the same vocabulary which emerges from those patterns, or the language of the pattern.(Alexander ,1979).

Such approaches required the existence of a designer who is observant enough to be able to understand existing patterns and at the same time to be sensitive enough to reflect these in their design proposals. These ideas brought about a new concept regarding quality. Quality in housing was no long a crystallisation of life, frozen as it were like a monument or a mixture of matter and life immobilised for posterity's sake, but a combination of permanency for some things and the transformation possibility of others.

Quality in housing in the 70's and 80's became synonymous with change, adaptability and the central figure

in this concept was the user and still is. Participating in the decision making process by the inhabitants enabled houses and their environments to be possessed by the people in the literal meaning of the word. This process therefore reflected human values of the lives of those who lived there. Quality became a function of the life going on, for better or for worse.

Based on studies of human perceptual systems carried out mainly in the 50's and the 60's , by scholars such as Boulding and Lynch another trend of thought was emerging . The main spiral of thought dealt with the question of how people perceived built environments. Different techniques and tools were developed with the aim of understanding people's perceptual systems . The purpose lying behind this according to David Canter was:

" the generation of physical forms or modification of them which relate appropriately to the conception of place which the various groups involved may have", ( Canter, 1967 ).

The techniques applied included public planning meetings as well as studies of users needs . Building on such schools of thought "Design Games" was a tool which was later on developed . It was concidered quite a useful tool for revealing users preferances and choices as well as understanding the criteria behind these choices.( Sanoff,1990 and Robinson,1987).

To conclude; the user was invited to participate in the planning , desinging as well as the actual provision of housing because of two anticipated benefits. The first is

that more effecient housing delivery systems in terms of their finance , management and organizational frameworks were developed.

The second is that user participation is of a more qualitative nature. User participation resulted in the creation of residential environments which could accommodate the different social, cultural, economic and psychological needs of different users as well as responding to the changes over time.

A goal no other conventional housing delivery system could promise, no matter how many different prototypes it provided. But does that mean that user participation necessarily leads to the creation of more suitable and flexible environments ?

The degree of flexibility or suitability of such environments would naturally depend on the amount of freedom the users enjoy when the opportunities are given to allow them the decision making powers and choice.

The ability to change and add to your home whether it be a house or an apartment in order to accommodate changing family requirements and economic circumstances is an essential pre-requisite to the understanding of quality in the residential environment.

## 1.4 Understanding Quality in the context of choice.

In order to evaluate the development of any public housing project or the development of any product or process of production two aspects need to be covered. The first is the aspect of quantity and the second is quality.

Although the two aspects are closely related in public housing projects the quantitative aspects often receive more attention that those of quality. After all if the business of living could be reduced to a quantative equation in terms of size and function there should never be any shortage of housing.

Quality in housing is seen as understanding user's requirements and meeting them. It can be interpreted as a choice related matter in terms of space, configuration,materials, finishes and a utility value to which space is appropriated. Quality is also a function of variation and variation requires an input of choice and decision from the users.

Quantity on the other hand has its logic in series repetition of systems and parts which are identical in all aspects. Consumer products are based on this logic. However the logic involves the aspect of choice and variation. That which is produced by the manufacturers of cars, TV's, fridges, radios, clothes, heating and lighting systems and the whole range of consumer durables is based on the mass production of element sub-systems co-ordinated to be assembled according to specific user requirements and level

of performance. Into this equation the intrinsic value of materials and the labour time elements which are consumed in the production process set the final index and quality value in monetry terms.

Public housing attempts too frequently to produce whole houses in which choice and variation are impossible. Even in the realm of self help projects where a part of a house or a core of a house is produced the degree of variation allowed in the extension of the property is limited to pre-determined plans and a set intrinsic value of the materials to be used. Thus the outcome ( quality ) is prescribed from the outset of the project regardless of supposed user inputs.

Whilst houses are not the same as Cars, TV's or fridges but are the material for the shaping of the built environment, there are examples enough, historically to show that standardisation and variation in public housing are compatible where the final composition or combination of parts and choice of the intrinsic value of materials can be decided on by the user to suit their particular requirements.

Quality, according to many philosophies, is usually perceived through subjective points of view, where the characteristics leading to quality are usually relevant to the subjects in charge of the assessement . But what about the object or the matter of quality itself ?

In his search for a definition of quality Pirsig finally concludes in a refusal to define quality. Instead he is satisfied with trying to see where and how quality can be found or created.

"Quality can be found only in the relationship between the subject and the object with eachother. Quality is the event at which the awareness of both subject and object is made possible" (Pirsig,1974,pp233) .

According to Pirsig quality is a cause not a result and that is the reason why it cannot be defined.

"Quality is the continuing stimulus which our environment puts upon us to create the world in which we live....Now to take that which has caused us to create the world and include it with the world we have created, is clearly impossible." (Pirsig,1974.pp.245),

Christopher Alexander was seeking to reveal the secret which causes towns and buildings to be "dead" or "alive". He refers to "Quality without a name".

" There is quality which is the root criterion of life and spirit in a man or woman, a town, a building or a wilderness. This quality is objective and precise but it cannot be named " (Alexander, 1979 pp 19).

However in a more specific way Alexander suggests that the livlehood of a place or a building depends on the patterns of events which take place in that space or that building and thus on the ability of the physical pattern to accommodate those events.

Quality could be seen as the pressure the environment puts on the users to act in order to modify and build such an environmenmt and to make it more responsive to accommodate their requirements.

However their freedom to act is not by any means absolute. Their freedom to act is defined by many constraints such as their abilites to take action over their experiences and resources. One of the main limitations to freedom is that of the freedom of others.

The more parties involved in the process of re-modification of the environment the more we experience limitations to our freedom. In the case of freedom in the context of housing the main parties involved are the users or beneficiaries, the professionals such as designers, planners, lawyers, financiers and the authorities.

Some groups amongst the users might share more or less the same perception concerning the quality of the built environment but more of them will not.

Meanwhile the government and users may have similar expectations but much more often they will have differing or conflicting perceptions of the qualitative results they want to achieve. ( Hamdi, 1985 ).

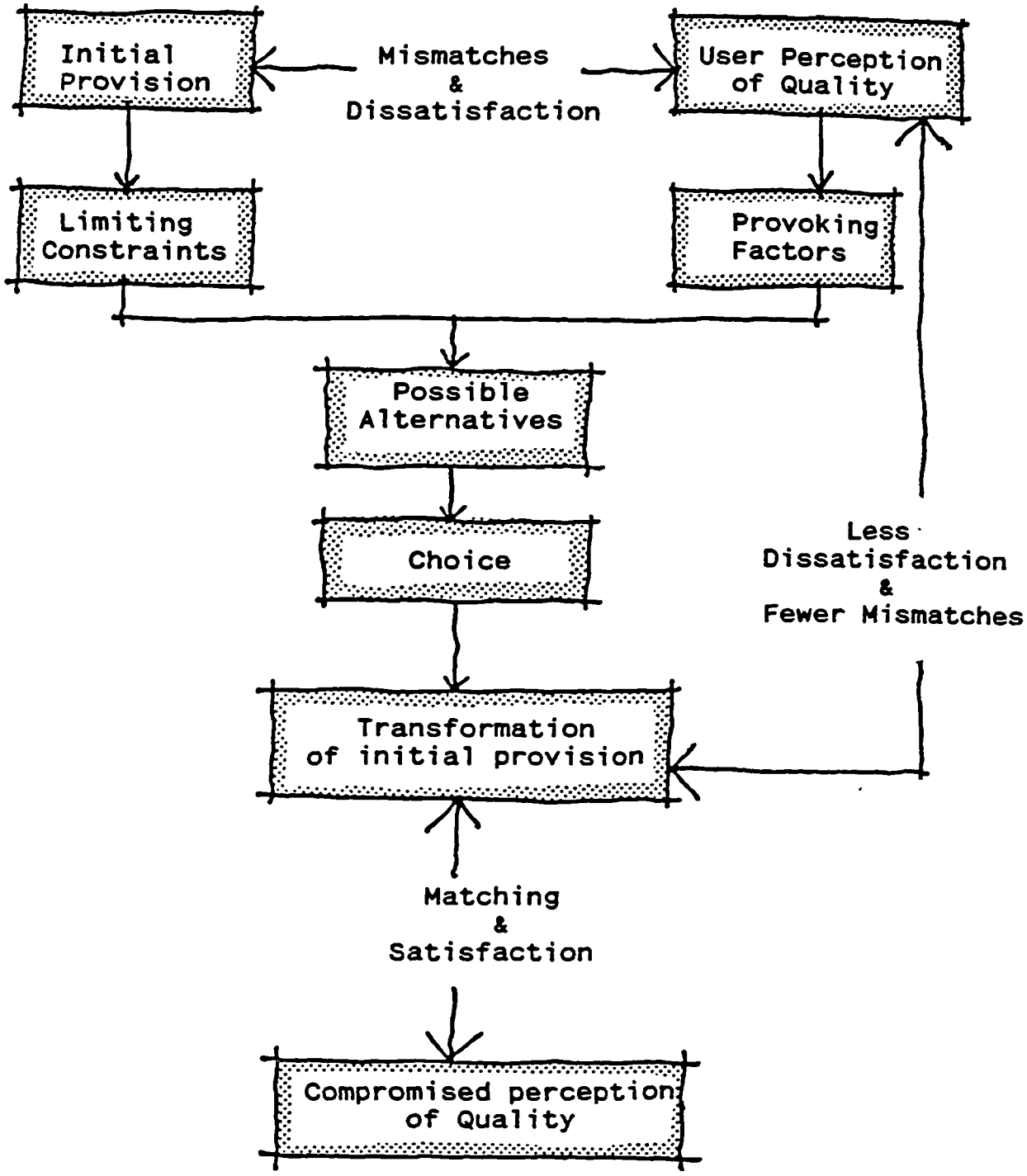



Fig 1.1 Steps of Decision Making in the Transformation Process.

Fig 1.1 illustrates the steps of decision making behind the transformation process. When users move into housing which does not match up to their perceptions of quality, they become motivated to introduce changes into their housing situation and its environment. Simultaneously users are confronted with limiting constraints. Some of the

constraints are related to the form and type of the initial provision, such as the design, construction and type of tenure. Others are related to the user's limitations of resources such as finace, materials, management, administration and information. Organisational abilities also form a part of the constraints which effect the performance of user's actions.

As for the professionals and the users an even greater gap may exist between what is desirable in terms of a qualatitive housing environment.

The user's position in the hierachy of decision making defines his or her domain of action. Naturally, the lower this position is, the more limitations the user faces. Users often have to reassess their requirements and hopes according to the existing limitations. Gradually their appreciation of what is desirable, good or bad is bound to be modified. In other words they have to reach a compromise in understanding which set of quality values responds better to their actual circumstances.

The process of choice involves the weighing up of costs against benefits or gains against losses. However this is a subjective process which is influenced by various interelated factors which make results difficult to predict.

There are two possible consequences of the choice results. The first is when the Transformation meet the users perception of quality and thus their requirements in a

better way than the initial provision leading to fewer mismatches and less dissatisfaction.

The second consequence is when the users perception of quality has been modified or compromised by the constraints resulting in an adjustment of their expections as to what they actually can achieve and thus satisfy their perceived requirements. Most probably a combination of both takes place such that the extensions satisfy the user's requirements in certain aspects and in others a compromise is made.

Therefore, from the authority's side there are two possible courses of action they might take to reduce the degree of mismatch between their perception of quality, values and standards and those of the user. These are:

1. By providing initial accomodation which addresses the way in which the target income group work and live and thus positively responds to users social, economic and cultural requirements with a minimal amount of buearocratic and physical constraints encouraging future development and extension activity.

2. By investing in a mangement. administration and information system which directly serves peoples planning and building requirements.

## 1.5 Summary.

a. In order to study user choices one has to investigate the constraints of choice which users have to work to when extending their housing.

b. The decision making process is not a purely systematic one whereby costs are weighed against benefits and the ultimate solution is chosen. Less logical and systematic factors intervene. This is one reason why user choices vary from one case to another and are difficult to assess or predict.

c. In the same way the understanding of quality varies from one person to another, however this understanding can be distorted by the limitations which people have to cope with.

d. Informal transformations which were not intended in the original project designs are the result of mismatches between users requirements and their understanding of quality on the one hand and the actual living conditions on the other.

e. In the case of aided self-help core housing, user transformations reflect mismatches between their ideas of what to do and the authority's proposed plans of how and what the beneficiaries should do. People are invited to participate in a process in which most decisions have already been taken even for the parts

which have been left for the resident to complete i.e the additional rooms and private outside spaces. Although politically they are in a better initial position than those of the formally completed housing projects they ultimately face more harassement, difficulty and responsibility in carrying out their building work.

f. Quality is socio-economically related to the control of decisions over physical and spatial elements. Imposed values of quality which do not match the aspiration requirements and abilities of the target population create an imbalance which is re-addressed by (building) activity which falls outside the prescribed housing and building regulations. The results represent users' control and efforts to breach the gap between their own percieved quality of the built environment with their actual reality. This inevitably challenges the authority's perception of values, standards and ultimate quality of what is expected not only from aided self-help projects but from any type of government housing project.

References:

Abrahams,C. (1964). Housing in the Modern World. Faber and Faber,London.

Alexander,C. (1979) The Timeless Way of Building. Oxford University Press, New York

Black, A. (1988) State Community and Human Desire, A Group centred Account of Political Values. Harvester,Wheatsheaf, St. Martins Press, New York.

Burgess,R. (1982) Self Help Housing Advocacy, A Curious form of Radicalism. A Critique of the work of John F. C. Turner, in Self Help Housing, A Critique (ed) by Ward,P Mansell Publishing Limited, London.

Canter,D. (1977) The Pyschology of Place, The Architectural Press Ltd, London.

Canter,D and Lee,T (1974) Psychology and the Built Environment. Architectural Press, London.1974 pp 184 - 194

Coleman,A. (1985) Utopia on Trial, Hilary Shipman, London.

Eiser,J and van der Plight,J (1988) Attitudes and Decisions; New Essential Psychology. Routledge, London and New York.

Habraken,N.J (1972) Supports; an alternarive to Mass Housing, Praeger Publishers, New York.

Hamdi,N (1991) Housing without Houses. Van Nostrand Reinhold,New York.

Hamdi,N (1985) Low Income Housing:Changing Approaches. The Architectural Review, August No 1062.

Kahneman,D and Tversky,A. (1979). Prospoect Theory; an Analysis of Decision Making Under Risk. In Econometrica, Vol 47, pp 263 - 291.

Kellet,P 1987 What Went Wrong in Killingworth?. Open House International Vol No pp

Lawrence, R. (1989) Public and Private Sector in the in the Definition of Housing Quality; in Quality in the Built Environment, Conference proceedings (ed), Wilkinson,N. Open House International Newcastle on Tyne.

Mangin,W and Turner J. (1968) The Barriada Movement in Progressive Architecture, Vol 5, May 1968 (pp 162).

Mangin, W.(1967) Squatter Settlements in Latin America, a problem or a solution. Scientific American, Vol 217 No 4, October 1967.

Michelson. (1980). Long and Short Range Criteria for Housing Choice and Environmental Behaviour. Journal of Social Issues, Vol 36, No 3 1980.

Moore,G. (1974) The Development of Environmental Knowing: An Overview of an Interactional Constructivist Theory and some data on Within Individual Development Variation; in Canter, D and Lee, T. Psychology and the Built Environment,Architectural Press,London 1974, pp 184-194.

Newman, O. (1972). Defensible Space; Macmillan, New York.

Pirsig, R. (1974) Zen and the Art of Motorcycle Maintainance, Vintage, London.

Porteous, J. (1971) Design with People. The Quality of the Urban Environment; in Environment and Behaviour. July,1971 pp 155-177.

Robinson, J. (1987). Trade off games As a Research Tool for Environmental Design, in Methods in Environmental and Behavioural Research (ed) Bechtel R et al, Van Nostrand Reinhold Company Inc.

Rappoport.A (1989) Environmental Quality and Environmental Quality Profiles; in Quality in the Built Environment, Conference Proceedings (ed), Wilkinson,N. Open House International. Newcastle on Tyne.

Rappoport,A (1983) Development, Culture, Change and Supportive Design; in Habitat International pp 249-267 Vol 7. No 5/6.

Rappoprt,A (1985) Thinking About Home Environments, A Conceptual Framework. In Behaviour and Environment, 1985 Vol 8 pp 255 - 286.

Rappoport, A. (1980) Environmental Preference, Habitat Selection and Urban Housing, in The Journal of Social Issues. Vol 36, No.3,1980.

Sanoff H, (1990) Participatory Design, Theory and Technique, Henry Sanoff,North Carolina State University,USA.

Turner, J. (1976) Housing by People. Marion Boyars, London.

Turner, J (1978). Issues in Self Help and Self Managed Housing in Open House International Vol 4 No 3.

# CHAPTER 2

## General Parameters of Housing Policy in Egypt

---

2.0 General Parameters of Housing Policy in Egypt.

2.1 The Government's involvement in housing provision.
- 2.1.1 Financial aspects.
- 2.1.2 Public housing affordability.
- 2.1.3 Examples of mass housing provision.
- 2.1.4 The experience of aided self-help.

2.2 Land market.

- 2.2.1 Land availability.
- 2.2.2 Land prices.
- 2.2.3 Land ownership.
- 2.2.4 Land subdivision.

2.3 Materials market
- 2.3.1 Material production in Egypt.
- 2.3.2 Impact of regulating the distribution of materials.

2.4 Rent Control

- 2.4.1 Impact of rent control on the market.
- 2.4.2 Possible solution and constraints.

2.5 Summary.

## 2.0 General parameters of housing policy in Egypt

Understanding the users decision making process in the transformation of government built housing through an evaluation process cannot be comprehensively achieved in isolation from the various parameters of housing policy in Egypt. There are four main parameters which need to be acknowledged as a general background for this study. The four parameters are:

1. Public housing provision.
2. The Land market.
3. The Building Materials market.
4. Rent control.

In particular, the first parameter of public housing provision has a direct impact on users decisions and inputs because it simply provides the site wherein the activity is taking place. The land market and materials market as well as rent control are all parameters which provide some basic data for understanding the legal, financial and economic backgrounds to the users building activity.

## 2.1 The Government's involvement in Housing Provision.

The deep involvement of the Egyptian government in the process of public housing provision started with the 1952 revolution. The post-revolution era can be easily divided into three distinctive periods, regarding the housing policy adopted in each. In fact those housing policies were, and are, the mere reflection of the political ideology prevailing at the time.

The first distinctive period, which we can identify, is form the year 1955 to 1965. As a socialist government, the achievement of social and economic equity came on top of its list of reforms. So a complete re-arrangement of the wealth distribution took place, accompanied by a similar change in the social classes stratification. The substantial gap between the upper class, the aristocracy, and the rest of the population quickly diminished, partially be the nationalisation of most of the large private properties and fortunes owned by the extremely rich, and partially by the great amount of public investment directed towards industrialisation. This process caused a substantial growth in the middle class, from which the bureaucratic structure of the state was mainly established, as well as the emergence of a large class of workers employed in great number in public factories and firms.

Fulfilling the housing needs of the low and the middle income segments of the population was considered one of the governmental responsibilities as much a basic human right as education, food, access to employment etc. As a matter of fact, the revolution government had inherited a crippling housing shortage which resulted in occupancy rates far exceeding the accepted standards of decency. In addition to a great rate of population growth as well as a very rapid urbanisation trend (respectively, they amount to 2.8% and 3.6% per year), all those factors contributed to the acuteness of the problem. As a means of trying to make the two ends of supply and demand meet as well as pushing the scale of wealth

distribution towards equity line, the government became involved in housing production. Many projects of popular, economic, middle as well as public workers/ housing were erected in the urban area throughout the country. The average target of production in the five year plan of 1960-65 was 14,500 units. However, it is important to note here that by then the government funds were quite large as a result of the nationalising policy, which made such policy a feasible one.

The second period from 1965 to 1975 witnessed a considerable drop in the production of public housing to less than a third of the production of the previous decade. Due to the state of war Egypt had been through, a great deal of the national income had to be directed towards armament purposes.

Meanwhile the high rates of increase in population growth and urbanisation were maintained. So the gap between the growing demand and the supply, whether it is private or public, was widened. The third period began after 1975, following the adoption of the free market policy. The socialist ideology faded away, and along with it a lot of the good intentions of providing the low and middle income sections with affordable subsidised housing. Suddenly the responsibility of housing provision was shifted from the government to the individual. But that does not mean that the public production of mass housing has stopped; on the contrary, it has considerably increased, achieving a rate of production of approximately 30,900 units per year.

Large amounts of public investment in housing were directed towards the desert for the construction of the new cities, into the execution of many mass housing projects within the existing cities. But the problem is that even with the heavy subsidy which such projects normally absorb, the achieved housing is not at all affordable by the majority of the population.

Meanwhile, the private capital which had been pouring into the market led to a substantial increase in the land prices. The exclusion of the lower income sections from the formal market was inevitable. The informal market was the only alternative affordable to those people in the lower and middle income brackets.

Those factors in addition to the remittance money sent from the Egyptian work power in the Arab countries, helped that market to flourish. The problems with the informal housing in Egypt are mainly the lack of services and public utilities and the high occupancy rate, which often resulted in poor quality living conditions.

### 2.1.1 Financial Aspects

Most of the public production throughout the fist period (1955-65) as well as a great part of the second one (1965-75) was for rental purposes. However, some of the production was devoted to ownership; a trend which increased towards the beginning of the 1970s.

For the period 1956-70 the methods of public housing finance were as follows: (Sakr, 1983:34)

1. Financing public housing for rent.

   i) Projects, including land and utilities were financed by the state through the local government. Funds were obtained from the central bank at the current rate of interest then lent to the beneficiaries at a rate ranging from 1% to 3% annually. This investment had to be amortised within 20 years.

   ii) Rents were fixed according to the occupant/s ability to pay. Cost recovery was hardly considered an anticipated objective. It was established that E.L 1.50 per room plus E.L 1.00 for hall represents the price that could be demanded from a low income household. According to this formula the monthly rent for a two room flat was E.L 4.00 and E.L 5.50 for a three room flat.

2. Financing public housing for private ownership.

   i) An applicant for a home ownership was required to make a down payment of E.L 100.00

   ii) The state provided a non-repayable subsidy of E.L100 per dwelling.

   iii) The remainder of the capital was provided form the budget of the Ministry of Social Affairs and was lent to the developer at an interest rate of 4% annually to be paid in 15 years.

In both of the two systems all the necessary infrastructure was financed and developed by the public sector.

The national housing plan of 1979 recognised a need to construct 3.6 million new urban units by the year 2000. This requirement would replace the 1976 housing shortage of 555,300 units (NUPS, 1979:420) as well as cater for the annual increase and replace substandard houising.

A programme for the years 1981 through 1985 was designed which projects the construction of 678,000 units. It was proposed that the public sector share of housing construction should increase from 5.3% of the total housing constructed between 1966 and 1976 to 26% during the plan period. The details of the housing production composition was as shown below in Table 2.1. Between the years 1989 and 1990 the average annual production of governmental residential units reached 169,874 which meets the plan in terms of numbers of units.

| Income level | % of production | Area | Cost | Unit Cost |
|---|---|---|---|---|
| Economic | 55% | 45-50 | 45-53 | 2061-2650 |
| Middle | 37% | 70-80 | 55-65 | 413-5160 |
| High | 8% | 100-120 | 70-75 | 7000-8000 |

Table 2.1 The composition of the National Housing Policy (1979-2000) (Source:National uUrban Policy, Ministry of Housing, Egypt, 1979, p420.)

The plan projected that about 40% of the financing for construction would have to be obtained from foreign aid and grants, and only 49% from conventional resources (i.e. the Central Bank). The remaining portion of the plan's cost would be financed through special saving programmes and sales of housing bonds. The realisation of the necessity to mobilise the private sector financial resources towards housing production was deepened during this period. The growth of informal housing reflected the potentialities and financial abilities of the private sector.

### Cost recovery from the different plan's housing schemes

According to this plan, cost recovery, or at least partial cost recovery, was considered as a main objective. However, the proportion of recovered costs to initial costs was different form one scheme to another. For instance it ranged from minimal anticipated cost recovery from highly subsidised public housing project constructed by the different governerates, to a subsidy of 62% of total programme costs over 30 years period of financing in 10th of Ramadan New City, to a complete cost recovery through land sales in 6th of October New City. As for the site and services projects, such as Ismailia Demonstration project, it was designed to stand as a self-financing scheme after the exclusion of the subsidies directed towards the implementation of the public facilities and infrastructure, which accounted for 41% of the total cost. For the details of the National Policy (1981-2001) see Table 2.2.

| | Population | Dwelling unit area ($m^2$) | Selling price of unit (E.£) | Minimum Annula Income required under current policies (L.E) | | Minimum Annula income required for full cost receovery (L.E) | | % total number of units | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Per household | Percentile income group % | Per household | Percentile income group % | | |
| **Public Housing** | 30,000 250,000 | | | | | | | | |
| Low | | 30-50 | 2738-3935 | 80-556 | 0.1-26.3 | 1440-2064 | 76.4-93.6 | 100 | 1 and 2 room flats |
| Middle | | - | - | - | - | - | - | - | |
| High | | - | - | - | - | - | - | - | |
| **Comparative Housing Programme** | | | | | | | | | |
| Low | | - | 4000 | 1012 | 56.9 | 2537 | 94.6 | 40 | loans for private organisations |
| Middle | | - | 6000 | 1586 | 79.3 | 3159 | 99.4 | 60 | |
| High | | - | - | - | - | - | - | - | |
| **Ismailia (El Hekr and Abou Atwa)** | All storeys 134,000 | | | | | | | | |
| Low | | - | 440-1039 | 300-708 | 3.5-36.2 | 312-720 | 3.9-37.0 | 100 | Upgrading and sites and services |
| Middle | | - | - | - | - | - | - | - | |
| H'gh | | - | - | - | - | - | - | - | |
| **Suez Cabanon New Community** | 40,500 | | | | | | | | |
| Low | | 20-28 | 599-2903 | 192-1488 | 0.4-76.4 | 648-1524 | 26.3-79.3 | - | services plots and core housing services land |
| Middle | | - | - | - | - | - | - | - | |
| High | | - | - | - | - | - | - | - | |
| **Sites and Services** | 19,000 | - | 1335 | 630 | 26.3 | - | 42.0 | - | |
| Low | | 9 | 796-2469 | 381-1375 | 5.9-73.0 | 509-1567 | 18.7-79.3 | 100 | services plots only |
| Middle | | - | - | - | - | - | - | - | |
| High | | - | - | - | - | - | - | - | |
| **World Bank Cairo Upgrading** | 70,000 | 9 | - | 501 | 18.7 | 627 | 26.3 | - | |
| Low | | - | 263-1446 | 60-792 | 0.1-34.1 | 120-1,248 | 0.4-68.7 | 100 | upgrading and infill plots |
| Middle | | - | - | - | - | - | - | - | |
| High | | - | - | - | - | - | - | - | |
| | | - | 545 | 440 | 11.5 | 400 | 11.5 | | |

*Table 2.2 Assessment of housing provision (1981-2000) Source: National Urban Policy Study 1981:366*

| | Population | Dwelling unit area ($m^2$) | Selling price of unit (E.£) | Minimum Annula Income required under current policies (L.E) | | Minimum Annula income required for full cost recovery (L.E) | | % total number of units | Remarks |
|---|---|---|---|---|---|---|---|---|---|
| | | | | Per household | Percentile income group % | Per household | Percentile income group % | | |
| **10th of Ramadan** | 150,000 | | | | | | | | |
| Low | | 15 - 18 | 2500 | 375 | 5.9 | 1798-2584 | 34.0-94.5 | 37 | core housing |
| Middle | | 90 | 6789 | 1450-1500 | 76.4 | 4592 | 99.9 | 20 | flats |
| High | | 100 - 135 | 7360-12343 | 1640-2216 | 81.9-91.5 | 4890-8095 | 99.9 | 43 | flats & villas |
| Average | | NA | 5880 | 1193 | 64.0 | 4118 | 99.9 | 100 | |
| **Sadat City** | 41,900 (first stage programme) | | | | | | | | |
| Low | | 25-44 | 2518-3450 | 436-939 | 11.5-49.7 | 1111-1741 | 63.3-84.0 | 47 | flats |
| Middle | | 57-100 | 4360-6518 | 1210-1741 | 49.7-79.3 | 3172-3452 | 90.3-99.4 | 48 | core houses |
| High | | 118-164 | 8876-21366 | 2615-5100 | 95.5-99.9 | 5033-12428 | 99.9 | 5 | flats & villas |
| Average | | NA | 4426 | 915 | 49.1 | 2363 | 92.6 | 100 | |
| **6th of October** | 70,000 (first stage) | | | | | | | | |
| Average | | NA | 7408 | 1953 | 87.5 | 4130 | 99.9 | 100 | self-financing |
| **15th of May** | 150,000 (final development) | | | | | | | | |
| Low | | 57 | 3552 | 1080 | 56.9 | 2918 | 97.6 | 10 | flats |
| Middle | | 60-70 | 5760-7000 | 1320-2220 | 73.0-91.5 | 3696-4116 | 99.9 | 29 | flats |
| High | | 80-240 | 7680-24480 | 1748 | 84.0-99.9 | 4368-10104 | 99.9 | 61 | flats |
| Average | | | 7712 | 4181 | 90.9 | 4374 | 99.9 | 100 | |
| **Helwan New Community** | 35,000 | | | | | | | | |
| Low | | - | 3960 | 1260 | 68.7 | 2100 | 89.0 | 77 | core housing |
| Middle | | 15.22 | 5300-6796 | 1704-2172 | 90.3 | 2748-3480 | 95.4-99.7 | 15 | core housing |
| High | | 20-50 | 7191-31882 | 2675-9295 | 89.0 | 2625-5460 | 95.5 | 8 | flats |

*Table 2.2 Assessment of housing provision (1981-2000) Source: National Urban Policy Study 1981:366*

### 2.1.2 Public Housing Affordability

According to the National Urban Plan of 1979 - 2000 only the richest 4% of the population could afford the housing which was proposed without any form of subsidy.

If we look at the types of flats of around 35 sq. metres offered at present to the low income groups in, for example, the 15th of May City, see Table 2.2 we can see the amount of subsidies required. Without subsidies only the top 2.4% of the population would be able to afford the unit price required to achieve full cost recovery. As a matter of fact by the time the flats were ready for sale in 1986 the selling price was about L.E 6000 ( almost double the price as stated in the National Plan.) The beneficiaries were required to make an advance payment of at least one tenth of this price. The balance of 90% was required to be paid over a 30 year period. The interest on the loan was 3% . The public subsidy was required to make up the difference between the 3% governemnt loan rate and the 12% of the Central Bank rate.

However the properties were still only affordable by the richest 27% of the population. The 35 sq.metre flats in this case were destined for the public factory workers of Helwan. According to a socio-economic classification made in the early 80's public factory workers earned between E.L 150.00 and L.E 500.00 annually and were classified as fixed low income earners. Looking again at Table 2.2 public worker's annual income still fell far beyond the income required to afford the subsidised price of the accommodation.

It is important to note here that the units of

accommodation offered to the low income groups in the 15th May City are much smaller in their areas and thus cheaper compared to the flats offered to the same taregt group elsewhere in other New Cities. Hence the gap between the target group affordability and the actual costs of those units is expected to be considerably wider than in the case of the 15th May New City.

The failure of public housing to reach the target group is demonstrated everywhere in Egypt's New Cities resulting in thousands of fully built and equipped low income flats which remain unoccupied for many years while the demand for affordable new housing continues to rise.

### 2.1.3 Examples of Mass Housing Provision

Typical public housing during the first, as well as the second periods was in the form of 27 - 50 sq.metre flats, consisting of two or three bedrooms with private services, in 5 storey walk-up blocks of flats. Public facilities were sometimes provided, although usually not in efficient terms. During the third period which started from the mid 1970s, and since adoption of the New Cities policy, the provision of public facilities was a main target, as those cities were planned to be self-sufficient in terms of services, public utilities, as well as in terms of its economic basis and employment opportunities. However, the general attitude followed in the New Cities was again mainly towards finished flats in 3-5 storey blocks. Some attempts were made to provide site and services or core housing schemes, but generally speaking without much success being achieved. Figures 2.1 and 2.2 show some examples of public housing provision through the different periods.

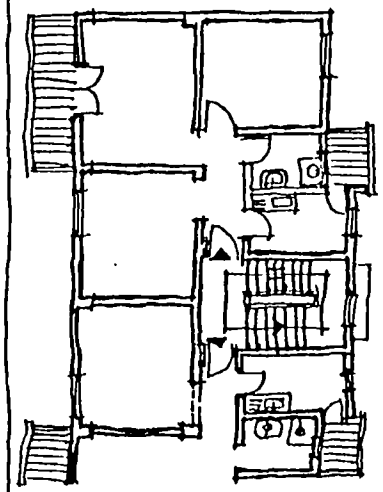
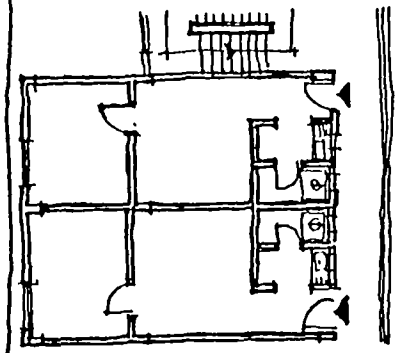
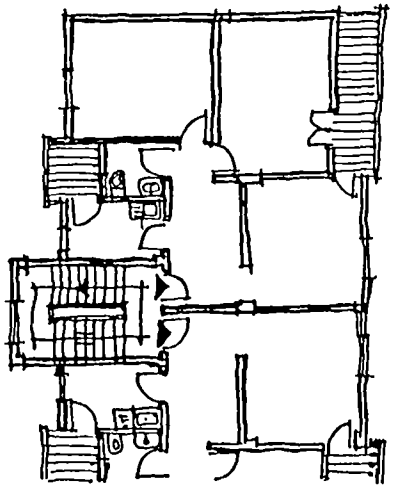
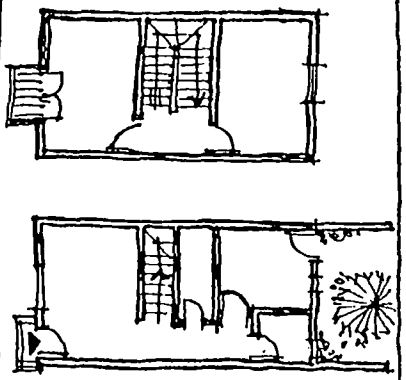
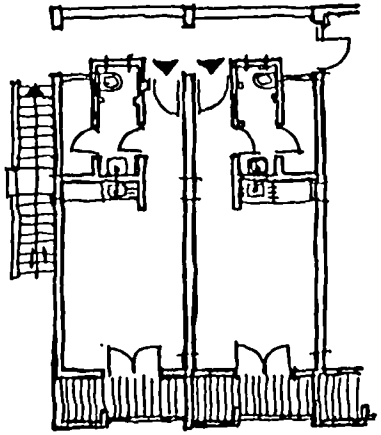
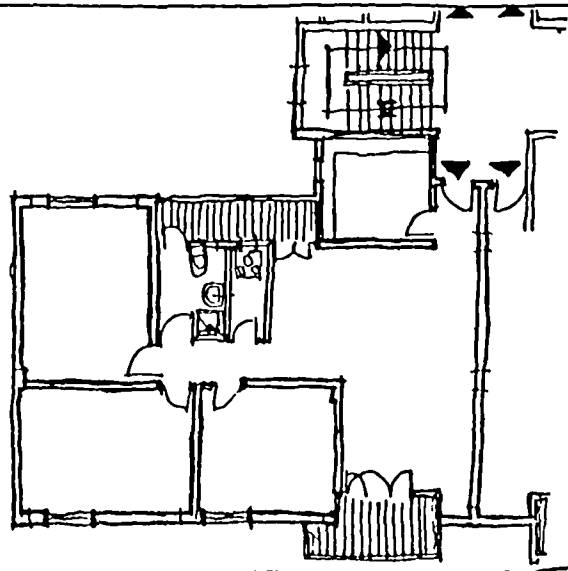
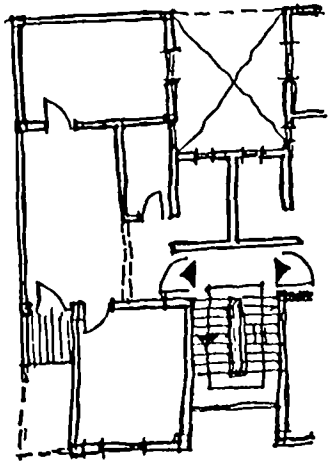
| |  |  |  |  |
|---|---|---|---|---|
| Housing project | 1. Helwan and Shoubra Imbaba and others | 2. Helwan. Shoubra, Imbaba and others | 3. Helwan , Shoubra, IMbaba and others | 4. Imbaba Workers' City |
| Housing unit area | 44.97m² | 27.27 m² | 47.13m² | 65.66m² |
| Nuber of storeys | 5 storeys | 5 storeys | 5 storeys | 2 storeys |
| Selling price | - | E.£ 600 (approx) | E.£ 1000 | - |

*Figure 1.2 Examples of public housing in Egypt in the 1960s.*
*Source: For examples 1, 2 and 3, Sakr, S., 1983:30,31, for examples 4, Aref, h., 1980:68*







| | | | |
|---|---|---|---|
| Housing project | 1. 15th of May New City | 2. 15th of May New City | 3. Helwan New Communities |
| Housing unit area | 36m² | 106m² | 67m² |
| Nuber of storeys | 4 storeys | 4 storeys | 3 storeys |
| Selling price | E.£ 3870 | E.£ 13,500 | E.£ 11,000 |

*Figure 1.3 Examples of public housing in Egypt in the 1970s and 1980s*

### 2.1.4 The Experience of Aided Self-Help

The Egyptian experience of aided self-help was a short lived one. Very little has been achieved since the introduction of self help ideas into the Egyptian context in the early 70's. In many of the developing countries the idea of aided-self help was introduced and encouraged by the international aid agencies and Egypt was no exception.

However it was not until the late 70's when the first aided-self help scheme was initiated. The Ismailia Demonstration project was the first full implentation of aided self help. Although many other schemes were proposed in the early 80's only a few were partially implemented whilst the majority were scrapped and abandoned. Even those which were partially implemented such as the Helwan New Communities scheme, have frequently been subjected to significant changes of objectives.

The Egyptian experience of self-help suggests that the national housing authority never really accepted the ideas inherent in self-help approaches especially when it came as a general form of low income housing provision. The upgrading projects, although very limited in their number, were met with a slightly lesser degree of scepticism and rejection but significantly still without much degree of enthosiasm.

Based on studies carried out in the late 70's with the collaboration of foreign aid housing expertise many projects were proposed. Generally speaking the form of

provision proposed was core housing planned in some of the New Cities and Communities. The achievements were meagre compared to the actual size of the initial proposals. There are many examples of self-help projects which have been cancelled such as the Sadat New City core housing scheme and the World Bank South of Metras project in Alexandria which consisted of 1,822 plots. The Suez Demonstration project consisting of 1,160 plots also failed to go ahead.

The Sadat New City core housing project was abandoned in favour of typical walk-up blocks of flats for sale to low income workers as the alternative solution. Other projects partially escaped abolishment such as the Assuit Core Housing scheme. This project was intended to include 2,711 core houses. However only 293 were provided whilst the remaining 2481 units were replaced by walk-up flats and other forms of completed government housing. A recent limited study concluded that the small 293 core housing project in Assuit was quite popular with its residents (Radwan and Eid, 1990). The same study found out that the scheme was successful particularly from the point of view of providing suitable and affordable housing for its beneficiaries and created a community which enjoys stronger social ties than in the case of its adjacent public housing neighbourhoods.

Helwan New Communities is another example of a project which was partially implemented. In this case a proposed 7,000 core houses was reduced to a serviced plot provision of 1,152 plots.

The Tenth of Ramadan Core Housing project was also subjected to a serious reduction in numbers. Initially the project was planned to provide 3,115 core houses whilst the actual number implemented was only 502. In both cases of the Helwan New Communities project and the Tenth of Ramadan the government reverted back to the policy of providing self-contained flats in 4-5 storeys with walk-up access.

In the majority of the cases mentioned above whilst there was no formal justification explaining the change of plan there was always a detectable underlying motive that self-help, whether sites and services or core housing, would produce sub-standard housing environments.

## 2.2 Land Market.

### 2.2.1 Land Availability.

Egypt's total area is about 1 million square kilometres. Only 5% of this area is inhabited, the remainder consisting mainly of uninhabitable deserts. The cultivable land area accounts only for about half of the inhabited area (about 2.5% of the total area). On this very limited area of land 50 million Egyptians have to survive, while producing food, building cities and practising all sorts of human activities. Out of the 5.8 million feddans, which represents the agricultural land, 40,000 to 60,000 feddans annually are estimated to be transferred to non-agricultural uses, mainly

to housing. The famous notion which says that land reclamation can substitute for the decrease in production caused by the loss of agricultural land is not quite practical.

Because the productivity of the reclaimed land lacks considerably behind the old one, besides that the process of land reclamation is highly consuming in terms of money, effort and water supply, as well as in terms of time required for this land to reach the reasonable productivity levels.

Nevertheless, in spite of all the efforts made to stop the loss of agricultural land most of the informal housing near a city such as Cairo is actually built on agricultural land. The profits made out of the sale of illegally subdivided agricultural land is irresistible, especially compared to the gains anticipated out of cultivating it. [1]

On the other hand, the informal housing sector caters for a wide spectrum of the population, and who cannot afford any other housing. As most of the Egyptian cities are surrounded by agricultural land, so the growth of any of the

---

1. As it would be explained later on, the old agricultural land as well as any other type of real property is continuosly exposed to undergo frequent subdividing of shares among different heirs, which makes the profits expected out of cultivating it minimal. Of course the closer the land is to the city, the more likely that it is going to be subdivided for sale.

informal sectors endangers its existence. Out of all of these conditions, the policy of New Cities built in the desert becomes a must for any sound planning for future development.

### 2.2.2 Land Prices

Land prices are continuously escalating in Egypt. Tables 2.3 and 2.4, on the following page, show examples of land prices in some selected areas of Cairo and the averages of annual growth rates. Concerning the informal sector land prices it is important to note that maintaining such rates of growth in urban land prices, the occupiers of such settlements are very likely to be forced to move to more peripheral sectors of the city, especially if such settlements are located close to the city centre. The original land uses of these area would be replaced by higher types of investments to match the price of the land. This process of pushing out the poorer land uses to the outskirts has already started in Cairo in areas such as Bolak and Imbaba since the 1960s. However, the rate with which this process has been developed has increased substantially since the start of the last decade.

Land speculation plays an influential role in the increase of land prices, both in free land market during the process of subdivision of land or even in the state controlled market; that is in the case of sale of publicly owned plots of land which have been connected to basic infrastructure networks (site and services schemes). As in the case of the Ismailia Site and Service Demonstration project, where the

Urban Land Values in Selected Areas of Cairo
(L.E. / m²)

| Area | 1966 | 1968 | 1970 | 1972 | 1974 | 1976 | 1978 | 1980 | Average annual Growth Rates (%) |
|---|---|---|---|---|---|---|---|---|---|
| Central Area including Garden City | | | | | | 500 | | 750-1000+ | 18.9 |
| Northern Industrial Area, Nile Frontage | | | | | | 500 | | 200-1000 | 18.9 |
| Dokkim Mohandesin, Giza | | | | | | | | 250-400 | |
| Zamalek | | | | | | 150-500 | | 400-750 | 10.7-49.5 |
| Nasr City | 5 | | 7.5 | | 26 | 30-60 | | 100-200 | 20.6-25.9 |
| Heliopolis | 5 | 10 | | | 14 | 100-150 | | 200+ | 20.6-25.9 |
| Maadi | | | 7.5 | | | 30-60 | | 100-300 | 29.6-44.6 |
| Shoubra El Kheima | | | | | | | | 60-150 | |
| Agricultural Land in Delta | | | | | | | | 0.75-1.5 | |
| Agricultural Land near Delta Road | | | | | | | | 2.0-2.5 | |
| Desert Land near Cairo | | | | | | | | 1.0-6.0 | |

Table 2.3 Land value in selected areas of Cairo. Source: National Urban Policy p.411. Steinberg F.,Informal Housing and Urbanisation - Positive Contibution and Challenge for the Future, IHS, 1987, p.8.

Land Prices in Informal Settlements
(L.E. / m²)

| Year | Greater Cairo Settlements | | | |
|---|---|---|---|---|
| | Met Okba | | Dar Es Salaam | Basatin |
| 1963 | - | | 1.50 | - |
| 1968 | 4-5 | | 4-5 | 1.50 |
| 1975 | 30-35 | | 25 | 35-45 |
| 1980 | 80 | | 60-150 | 80-150 |
| 1968-80 Rate of Increase (%) | 28.4 | | 25.3-32.8 | 39.3-46.8 |

Table 2.4 Land Prices in Informal Settlements. Source: Abt Associates, Dames and Morre et al, Informal Housing in Egypt,1982,p.159.

land purchased from the project agency witnessed a dramatic increase in price when illegally transferred to other owners. The formal land prices as purchased from the Project Agency at the outset of the project ranged from E.L2.00 per sq. metre to E.L10.00. Some years later, in 1986, it was found that land prices had increased in the range from E.L80.00 per sq.metre to L.E200.00 when transferring ownership. (Mettwaly, 1987:19).

### 2.2.3 Land Ownership

There are three types of land ownership in Egypt: private, wagf (Mortmain) and public ownership.

a) Such ownership has rights and obligations which are similar to those articulated by the Anglo-American law of the Napoleonic Code. However, several differences exist, mainly including the following:

- the right of preemption (Shufa), under Article 936 of Egyptian Civil Code, a neighbouring owner has the right to substitute himself instead of the purchases in the sale of property. However, some conditions are required to be satisfied, such as, that the land of the neighbour adjoins the land being sold on two sides and its value is at least one-half of the land being sold.

- Inheritance regulations: As the inheritance rules are clearly stated in the Koran, the Civil Code had to fulfil them. The Islamic law of inheritance allocates certain shares from

the inheritance to the different eligible parties. It also restricts the dispersion of inheritance by will to a maximum of one-third of the estate. Thus fragmentation of land holding often results. To discourage this fragmentation, family joint ownership was encourage by the Civil Code, mainly by preventing the sale of any share without the agreement of all the co-owners.

- Separation of land ownership from ownership of the building of part of the building: Under the Civil Code separation between ownership of land the building on that is possible, which encourages the vertical extension of building by adding more storeys, which can be owned separately from the rest of the building by another party, rather than the owner of the land or the initial building. This sort of practise could be quite convenient among the low income sections of the population.

b) Public Ownership of Land

Public ownership accommodates two types of publicly owned land in Egypt.

- State domain: which is the land usually referred to as desert, uncultivated or unclaimed land which could become property of anyone who settles on it. However, now settling on this land requires permission, then it could

be registered. This type of land is administered by the different governments.- Public domain: it is the land owned by state and serves as public utility, such as, rivers and streams, roads, military installations, squares, areas allocates for public ways and publicly owned land which can be used for purposes of land development. Publicly owned land cannot be transferred to private ownership by right of prescription (right to gain ownership after continuous squatting on the land).

c) Wagf land. Putting property under wagf state means that the property cannot be mortgaged or sold and that only revenue from it belongs to the beneficiaries (Abu Lughid, 197: 154). There are two types of wagf property:

- Wagf Khairi: when the property is held for religious or charitable purposes.

- Wagf Ahli: when the property is held under wagf but the benefits obtained from running it go to descendants of the initial owner. The main purpose of holding a property under wagf Ahli state is to preserve it as a single unit and limits the number of legal heirs receiving benefits generating from it.

### 2.2.4 Land Subdivision

Regulation of subdivision in urban areas is the responsibility of the Housing Department in the Governorates. Officially, the period allocated for the responsible authority to reach a decision of approval or disapproval of the proposed subdivision should not exceed six months after the submission of the plans by the applicant. But in practical terms, this period often exceeds the stated limits. The reasons for disapproval are various, some are related to subdivision regulations and others to building regulations.

In order to obtain permission to subdivision certain standards must be fulfilled [1], concerning the share of land allocated to public uses. Specification such as maximum coverage of plots, street widths, minimum plot sizes and frontages and other specific standards are left to the local councils to decide upon according to general planning conditions which are approved by both the local town councils and the governorates.The developer of any proposed subdivision is responsible for public utilities provision, or paying for their costs. The local council has the right to provide the public utilities if the developer fails to, then charge the developer the cost plus 10% charge of overheads.Penalties for dealing with property before obtaining a subdivision approval consist of imprisonment for up to six months and/or a fine form E.L100 to E.L2,000.

---

1. Law No. 3 of 1982 of the Physical Planning Law for Rural and Urban areas.)

## 2.3 Materials Market

Cement, steel and bricks are the basic materials which the construction industry in Egypt depend upon. Material costs amount to about 20% of the total construction costs (Bass, 1979:5). The distribution of cement, steel , glass and timber is regulated by the government, a policy which is aimed at ensuring the distribution according to National Housing Policies. However, as in the case of rent control, regulating the distribution of materials encourages the black market to flourish.

### 2.3.1 Material production.

Egypt produces many items of construction materials such as cement, steel and glass. Timber is almost wholly imported. The production of cement started in Egypt in 1927, the oldest and largest factories are Tourah and Helwan Cement companies. Although the production has been steadily increasing the gap between production and consumption seems to get wider. The deficiency in cement production from the year 1974 until 1980 was 7,969,000 tons (Zahlan, 1984:199). In 1973 the production was 3,616,000 tons and the consumption was 3,054,000, in 1980 the production was 4,156,000 and the consumption 5,035,000. However, the production in 1989 reached 13,339,000 tons and it was anticipated to increase dramatically to 23,000,000 in 1991. As for the steel production, in 1985 Egypt was producing 2,380,000 tons while its consumption was 3,250,000. However, with the dramatic increase to 13,800,000

tons in 1989, Egypt still has to import steel for construction purposes. The brick production represented a new challenge to the Egyptian construction industry when alternatives to the red bricks (burnt mud bricks) had to be found to save the agricultural land. Hence the production of sand brick as well as cement bricks was encouraged. But until now no alternative has succeeded to deliver to same level of quality provided by the red bricks in terms of bearing capacity, irresistibility and insulation.

### 2.3.2 Impact of regulating the distribution of materials

Obtaining materials at the official prices (from the government) is carried out through certain rules, such as (Bass, 1979:5)

- cement allocations are given on a monthly basis over the construction period, with payment in advance and delivery three or four months later;

- steel allocations are given floor at a time;

- wood and glass allocation are given one floor at a time and after the completion of the previous floor.

The main client who receives the regulated materials at the official prices is the public sectors. The private formal sector received some of its needs from materials according to the official prices, but definitely it still has to approach to black market in order to fulfil a considerable

part of its needs. On the other hands the informal sector has to deal entirely with the black market, as building permissions are required to obtain these materials at the subsidised rates. Table 2.5 shows the difference between the official and the current prices of some materials in 1975.

| Material | Official Price (E.£) | Current Price (E.£) | Unit |
|---|---|---|---|
| Cement | 15 | 30 | Ton |
| Steel | 150 | 180 | Ton |
| Timber | 120 | 180 | $m^3$ |
| Glass | 1 | 2 | $m^3$ |

**Table 2.5 Official and current prices of building materials, 1975. Source: Bass, H.J., 1979, p.10.**

### 1.4 Rent Control

Rent control was first introduced in Cairo in order to overcome the severe housing shortage following the first World War, then it was stopped after some years. It was introduced again in 1944 but was applied only to housing prior to 1944. Since 1952 a series of laws were established at approximately 5 years intervals between each, in an attempt to reduce the rents of the new constructions. These acts reduced existing rents by 18-20% for the building constructed form 1747. Then a law in 1965 made an additional reduction of 20% in rental value of all buildings constructed after 1944. So all the rents of the buildings between 1944 an 1965 were

lowered below the initial rate set at the time of their construction. Really this last reduction had great impact on the existing property as owners of these buildings neglected their maintenance when they found that the revenues of these buildings, in many cases, were not sufficient to maintain them. So these buildings began to deteriorate.

### 2.4.1. Impact of Rent Control on the market

The effect of applying the rent control hardly matched the good intentions which they were designed for. Actually, they resulted in the distortion of the market of rented housing. Because of minimal expected outcomes, the landlord lost the motivation to invest in rented housing. So, the demand for rented housing outnumbered the supply dramatically, which in turn set the suitable environment for the black market to flourish. Table 1.6 shows the value of key money paid for the different qualities of rented housing according to 1979 prices.

| Unit Quality | Size M.sq. | Current Cost. Off. L.E | Annual Rent. L.E | Key Money L.E1000's |
|---|---|---|---|---|
| High | 150 | 10,000 | 360 | 10 - 40 |
| Middle | 90 | 5,000 | 180 | 1.5- 4 |
| Low Cost | 80 | 2,000 | 80 | 0.8- 1 |

Table 2.6 Housing Costs, Rents and Key money.
Source: Barrada,A.M Public Policy and Economics of Housing. The Interim Report Working Papers, Cairo, 1979, p.15.

### 2.4.2 Possible Solutions and Constraints

Many of the studies are concerned generally with rent control policies in the Third World and particularly in Egypt and end with recommendations for decontrolling the market. However, some of reservations and caution must be applied, as immediate decontrol can cause injustice, and financial difficulties, for some of the tenants (Malpazzi, 1986). In the same study certain combinations of the gradual decontrolling of the market is suggested , such as vacancy decontrol, or a combination of vacancy control, decontrolled rents and controlled annual increase. However, in my opinion, the vacancy control suggestion must be taken with a great deal of caution, i.e changing the law so that rights of occupancy at controlled rents cannot be passed to heirs. This can result in dramatic effects to the inheritors who simply might not be able to afford the market prices suddenly after the death of the initial owner (usually, the head of the household). With all the related laws of taxation, inheritance, pensions and insurance, it is very difficult to imagine how a large sector of the population can adapt to this suggestion, unless the application of such laws would be more specific to each individual case which is, in turn not at all a practical solution.

Another important effect of the rent control is that it resulted in the limiting of the household mobility, as the medium length of tenure for renters is 13 years, far exceeding that in the other markets (Malpazzi, 1979:190). In an attempt to stabilise the market a new rent control law was issued in

1981. According to this law, the annual rental value of newly constructed residential units should not exceed 7% of the total value of land and building, and at least two thirds of any residential buildings should be set aside for rental (Article 1). Article 9 of this law dealt with the building leased prior to 1977.

## 2.5 Summary

Based on the Egyptian housing policy parameters, as have been briefly presented in this part of the study, the following conclisions can be drawn:

1. The public housing provided in the 60's and the early 70's was unable to satisfy the needs of the low income groups in terms of quality and quantity - affordability was only possible by this group due to the heavy public subsidies involved.

2. The main form of government housing provision in 4 -5 storey walk-up flats have failed to satisy the the needs of the target groups i.e low income households. This form of housing, of key ready, totally finished and fully equipped residential units is not affordable by the target group and usually ends up in the hands of economically better off groups. More importantly the subsidies involved in the project development and the special terms concerning long term loan interest rates are absorbed by the middle and higher income groups, who become the ultimate beneficiaries.

This situation applies to economic housing available in the New Cities as well as in similar public housing schemes in the country.

3. The low income groups are not able to benefit from the subsidised construction materials market as they usually do not have access to it. Hence they have to obtain building materials from the commercial black market with prices far exceeding official rates.

4. The continuous increase in land speculation activities within and around urban centres is an endless spiral of escalating prices which exclude the urban poor. The urban poor are continuously driven outwards into more desolate areas, far from employment centres, which lack the necessary basic infrastructures as well as the appropriate public amenities. Meanwhile the growth of the informal land subdivision practises threaten existing areas of the cultivatable agricultural land in a serious way.

5. Rent control, as one of the main parameters of Egyptian housing policy, is an important factor to be aknowledged in order to be able to understand some of the low income peoples actions and decisions; these will be addressed in the later stages of the study.

References

Abt Associates Inc., Dames and Moore and GOHBPR. 1982. **Informal Housing in Egypt,** USA Agency for International Development, Cairo.

Abdel-Kader and Ettouney.S, 1989. **The Egyptian New Settlements, A Critical Review with special reference to adopted housing policies;** Open House International, Vol.14 No 2. 1989.

Abou Lughod,J. 1971. **Cairo;1001 Years of the City Victorious,** Princeton University Press, New Jersey.

Barrada,A. 1979., **Public Policy and Economics of Housing,** Interim Report Working Papers, Cairo University and MIT, Cairo.

Bass,H. 1979. **Urban Low Cost Housing in Egypt,** Building Research Establishment No 141 /79, Garston, Watford.

Eid,M and Radwan,M. 1990. **Self-Help and Urban Environment Upgrading;** Seminar proceedings on Shelter and Urbanisation, Ministry of Housing, GOHBPR, Cairo.

El Kadi,G., 1990. **L'Articulation des deux circuits des gestion Foncier en Egypte; Le cas du Caire,** in Housing Africa's Urban Poor, Manchester University Press.

El Messiri.S, 1989. **The Squatters Perspective of Housing, An Egyptian View;** in Housing Trends in Thirteen Countries edited by Vliet. W. Duke University Press.

El Messiri.S, 1990. **Proposed Framework for an Integrated Approach to Institutionalisation of Community Upgrading and Sites and Services Projects.** Seminar Proceedings on Shelter and Urbanisation, The Ministry of Housing, GOHBPR,Cairo.

Joint Research Team, 1979. Cairo University and MIT, Seminar Proceedings, **Core Housing and Sites and Services Projects for Low Income Groups,** The Ministry of Housing, Cairo.

Ministry of Housing, 1982. **Marketing Reports on the 15th May New City,** Cairo.

Ministry of Housing, 1991. **Housing in Egypt,** Cairo.

Sakr,S. 1983. **In-Use Modification of Public Housing in Cairo, Egypt,** Masters Thesis, MIT.

Zahlan,A 1983. **The Arab Construction Industry,** St. Martins Press, New York.

PART 2

# CHAPTER 3

## Case Study 1 : The Transformation of Multi - Storey Public Housing Provision , The Case of Helwan , El-Tebeen and Imbaba

CHAPTER 3

## 3.0 C A S E S T U D Y 1.

**The Transformation of multi-storey Public Housing provision: The Case of Helwan, El Tebeen and Imbaba.**

This chapter is devoted to the presentation of a case study based on field work investigating the phenomenon of the transformation of five storey walk-up public housing flats.

Before the case study is presented there is a brief literature review of other studies documenting the same sort of phenomenon in Egypt and other countries of the world. Following this the case study methodology and procedures are presented. Finally the field work data is reviewed under the headings of; 1. initial provision; 2. the transformations and 3. the parties involved in the process.

### 3.1 The transformation of public housing; a world wide phenomenon.

Users' transformation of public housing is a world wide phenomenon which takes place whenever government housing fails to meet the users' requirements and expectations or does not respond to the changing requirements of households. Such mismatches are widely expected from public housing provision as:

"it does not only re-create an instant environment but allows occupancy only on condition that nothing will change" ( Habraken, N.J., 1983:228 )

Transformation takes different forms and is brought about by different technologies which depend in turn on the parameters of each context. Transformation purposes are quite variant too. Theoretically speaking, there are three basic types of displacement which could be introduced into a site in order to transform it, which are: transformation by addition of elements, elimination of elements or simply change of position of elements. ( Habraken,N.J., 1983:15).

The practical interpretation is that the most common purposes of users' transformation could be to achieve an increase in the habitable area of the dwelling or to introduce some changes concerning the levels of privacy, whether external or internal or finally to cater for new activities which the dwelling did not accommodate before.

There is a growing amount of research which documents user transformation of public mass housing. However the amount of available research by no means adds up the the extent of the activity in different parts of the world.

In New Dehli,India, multi storey extensions have been introduced by the residents in the Jangpura two storey gallery type access blocks of flats. This has been documented by Benjamin. (Benjamin,S. 1985 ). Dasgupta has discussed the negotiation process between residents which allowed similar extensions to be built into a public housing project in Kalkaji, Dehli. ( Dasgupta A., 1990 ).

In Hong Kong residents living in very small

appartments have constructed a quasi-permanent cage projecting from high rise blocks of appartments. (Steinberg,F. 1988 ). Another example of public housing transformations comes from Algeria. Bouchair observed transformations introduced by Algerian public housing residents living in five storey walk-up flats. ( Bouchair, J. 1988 ). She reported activities concerning the complete re-arrangement of internal space, the moving of kitchens and bathrooms and the filling in of balconies. According to Bouchair such activities represent the residents efforts to to make their habitat meet their social and cultural requirements.

A recent study at Newcastle University (CARDO), sponsored by the Overseas Development Administration reviews examples of the transformation process in a number of developing countries in particular Ghana, Bangladesh,India and Egypt. ( Tipple,G, et al, 1991 ).

In the early 80's, in Egypt, Cairo, Steinberg has observed extensions built by the residents of a public houising project in Ein El Sira, ( Steinberg,F,1988 ). The extension were multi-storey attached to 4 and 5 walk-up blocks of flats which government built in the early sixties. The same project was the subject of a more detailed research study based on a quantitative physical survey covering a large number of flats which records the occurance and size of the extensions. ( Ahmed, 1990) Ahmed stresses the impact of the area of the initial provision on the size of the built extensions. According to his findings the one roomed small

flats were more frequently extended than the two or three roomed flats. He also aknowledges the variety of the designs of the extended flats in relation to the uniformity of the initial provision.

In research carried out by Sakr in 1983, she observes the transformations in Zeinhoum Popular Housing. This is another housing project built in the early sixties. However the transformations observed by Sakr did not deal with multi-storey extensions but with the filling in of balcony space, small ground floor extensions utilized as shops and roof extensions. In her research Sakr holds the transformation activites as partially responsible for the "poor state" of the settlement; however she aknowledges the fact that such activities are justifiable attempts to adapt an environment towards meeting the residents social,cultural and economic requirements. (Sakr, 1983).

Finally, Helwan Economic Housing in the south west part of Cairo, was the subject of some research carried out by Tipple,Wilkinson and Nour in 1984 nand 1985, (Tipple et al, 1985 ). The researchers conducted a socio-economic survey of a limited sample of 90 households to find out why and by whom the extensions were built. This project forms a part of the first case study in this research investigating the various mechanisms which operate to support the transformation activity.

## 3.2 Case Study 1. Methodology and Procedures.

## Helwan Economic Housing, El Tebeen Marazzik Housing and Imbaba Naser Housing.

### 3.2.1 Methodology

The first case study investigates the general framework through which the transformation process is carried out. In other words an attempt is made to discover the underlying structure of relationships which sustains the continuity of the process. It is assumed that through revealing the structures of operation and its component parts the user's inputs can be more comprehensively understood and evaluated. Before judging the quality of the resulting environment all the political, social,economic and physical complexities involved need to be aknowledged.

For this purpose an open ended qualitative research method was employed as opposed to a quantitative one. As Patton has suggested;

"...yet the open ended responses permit one to understand the world as seen by the respondents. The purpose of gathering responces to open ended questions is to enable the researchers to understand and capture the points of views of other people without predeterming those points of view through prior selection of questionaire categories". ( Patton, 1990, pp:24 )

In the housing field qualitative methods have potential in areas such as pre-implementation evaluation, studying user's needs as well as investigating community organisations.

" It is particularly useful in investigating the composition of community organisations in existing settlements which can be harnessed to assume the duties of local housing authorities, arranging assistance for individual families and even resolving the problems of site layouts and house construction". (Sinha,1991.p.18)

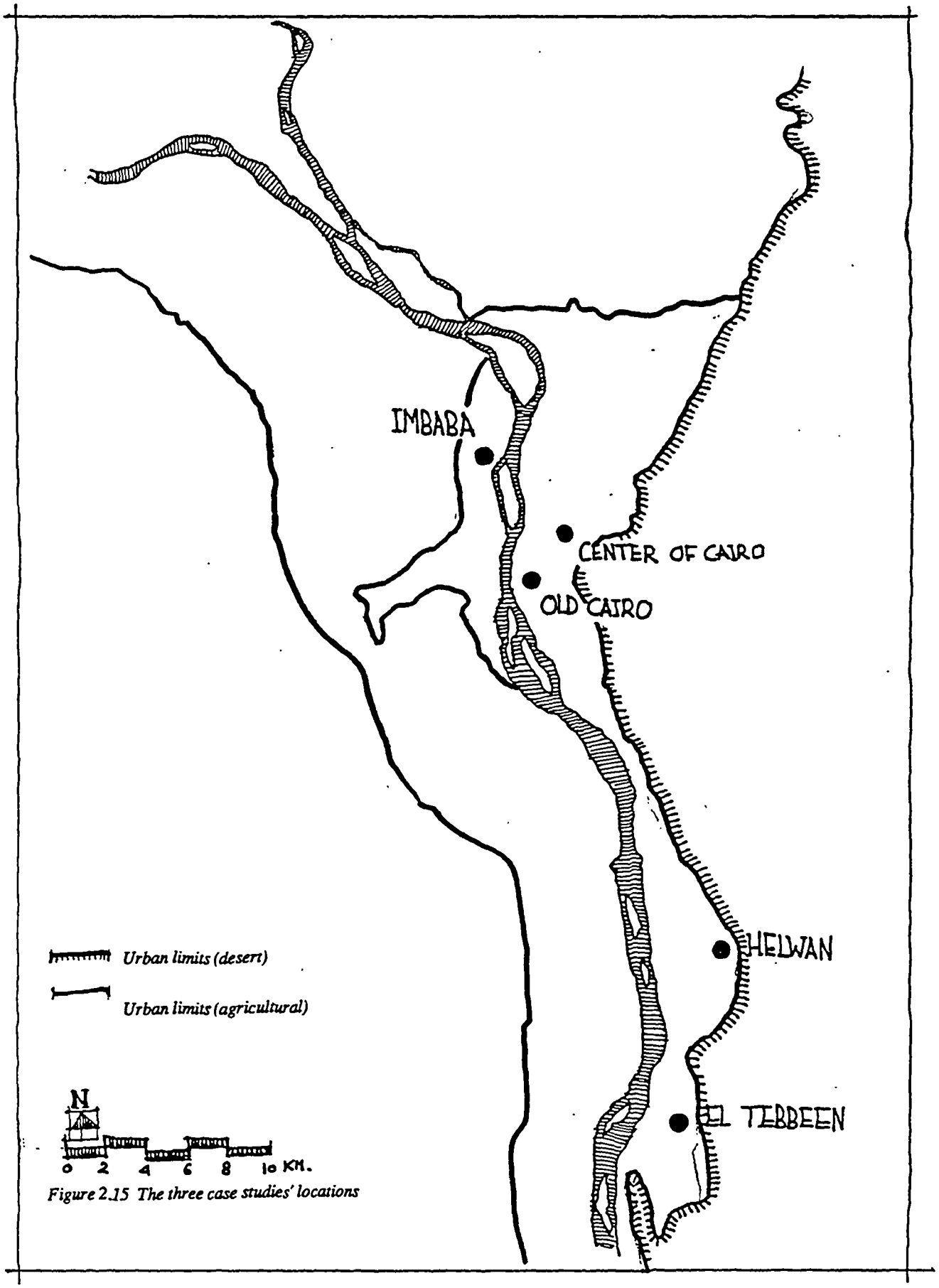



*Figure 2.15 The three case studies' locations*

Fig. 3.1 Location of Helwan, El Tebeen and Imbaba.

Although the main appraoch of the research was qualitative, whenever it was felt that quantification would be useful quanitifiable data were obtained.

The first case study is composed of data from three sites and comparative analysis is used. The comparative approach is quite helpful for maintaining a certain level of objectivity and to avoid subjectivity as much as possible which can easily creep in onto this type of qualitative research.

The three sites chosen were:

1. Helwan Economic Housing (Helwan Workers City)
2. El Mazzarik housing in El Tebeen.
3. Nasser Popular Houising in Imbaba.

These three projects will often be referred to in this study respectively as Helwan, El Tebbeen and Imbaba. Fig 3.1 shows the three districts where the three porojects are located. Both Helwan and El Tebeen projects have multi-storey extensions built co-operatively by the residents whilst in Imbaba this communal form of extension did not take place. Instead the residents have built extensions which structurally support themselves and which do not depend on support from below or they have made internal changes to their flats.

The reason behind the choice of projects will be discussed later in relation to the site details. Fig 3.2. illustrates the case methodology.

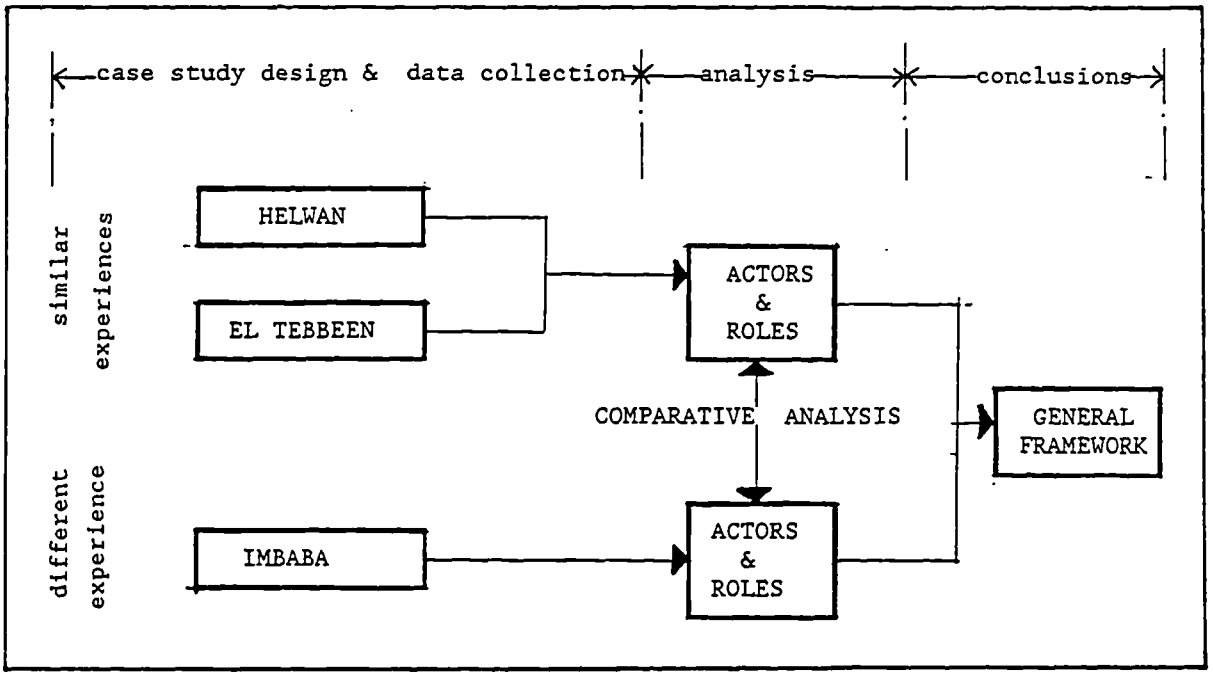



Fig. 3.2 The Case Study Methodology.

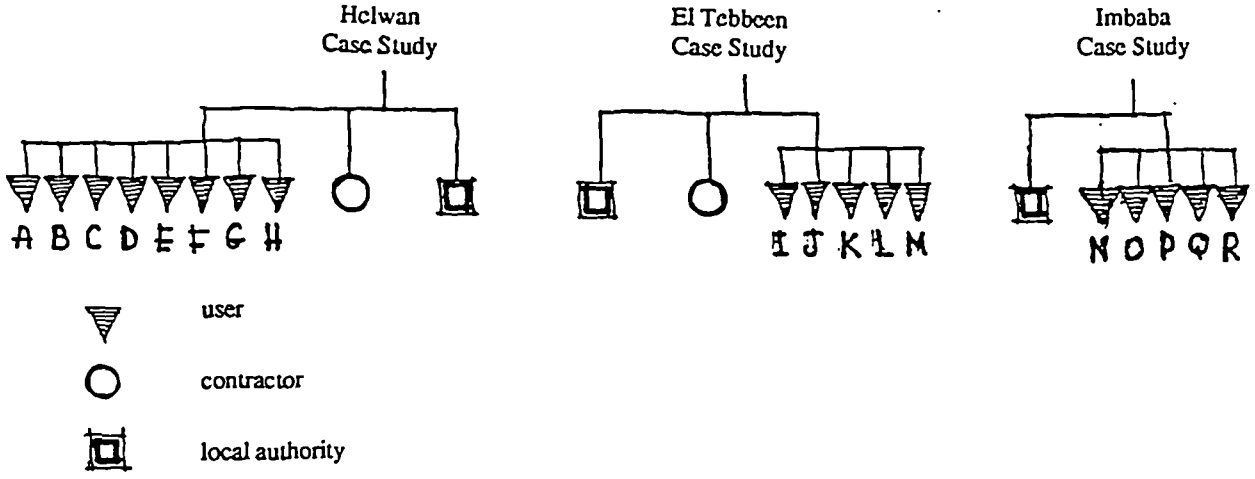



Fig.3.3 The Case Study Composition; the informatives in each of three sites

### 3.2.2 Procedures and Analysis Techniques.

**Procedures.**

There are many methods of data collection which could be used in qualitative research, such as participant observations, interviews, life histories and the recording of physical data. It is also quite useful within the one case study to use a combination of more than one method.. Multiple sources of evidence is one among other of the tactics which can be used to increase the construct validity of a case study. Providing that the use of this tactic is in a manner which encourages a convergent line of enquiry (Yin,1989 pp,42).

In this case study (Case Study 1) there were three means of data collection:

1. A series of semi-structured interviews with the main actors involved in the transformation process : the users; the builder / contractor; the local authority,
2. Recording of the physical transformations were by means of detailed drawing of plans and photography.
3. General observations on either the physical conditions of the environment or people and behavoiur.

In addition to the three methods of data collection which have been applied to each of the three sites the physical plan of a part of the neighbourhood which records the position of the transformations was also drawn up for Helwan only. Helwan was selected because it is the most consolidated site with many extensions. 68 blocks were surveyed which includes a total of 2460 residential units.

The three main actors, the users, the contractors and the local authority each play important roles in the process of carrying out the extensions. Whilst this is generally known the main information lacking relates to the knowledge of the interaction of the roles played by the actors and the influence this has on the extension process.

> "A power on the site can only be known by the transformation it performs and the control it exercises, as revealed in the site....as observers of the site, we can find ourselves in a position not unlike that of someone watching a chess game who does not know the rules and finds out that there is no book in which they are codified and that, moreover, the players do not seem to be able to explain then either." (Habraken,1983,pp76,77).

Three different semi-structured interview forms were drawn up for the interviews of the three groups of actors. The interviews contained two parts. The first included specific questions aimed at establishing a full picture of the person(s) concerned and his or her exact role. The second part was usually in the form of a free discussion where the respondent was encouraged to speak about whatever he or she thought relevant to the issue. This was recorded using the respondent's own words. The interview forms relating to the first part can be found in the appendicies 1, 2 and 3.

## Analysis Technique

For the analysis of the data obtained a simple strategy was followed. The strategy comprised two main steps. The first was to identify the different informatives and their roles. This was achieved through a parallel presentation of the main and most essential characteristics of each of the three types of informatives and their roles.

The second was to identify the intersection points between each actors roles. In this part the impact of the initial provision had to be aknowledged and also its influence on the decision of the main actors had to be clarified.

### 3.3 Introduction to the three Sites;Helwan, El Tebeen and Imbaba.

It is important to note here that the three projects were built more or less in the same time. They were all built within the first distinctive period in the history of mass housing provision in Egypt (1955-65), and particularly within the second half of it, which implies that the households of the three settlements would share, more or less, the same stage of development concerning the family, formulation and age cycles. Two of these projects are mainly for housing public workers, which are Helwan and El Tebbeen, except that the later accommodates a small number of non-public workers households, as a result of allocating some of the project housing units to the noon=public workers needy and emerging cases by El Giza Governorate.[1]

On the other hand, Imbaba Nasser housing is a popular housing scheme which is not tied to any particular

---

1. At the time of construction of El Tebbeen Marrazik, El Tebbeen was under El Giza Governorate authority; in 1969 it changed hands to Cairo Governorate.

type of employment. However, as Imbaba is one of Cairo's industrial bases where many public factories and workers' housing were intensively built in during the 1960s, it is quite expected to find some public workers living in Imbaba Nasser Housing. Figure 2.3 illustrated the composition of each of the three case studies.

### 3.3.1 The three sites:

a) Helwan Economic Housing

Helwan is located on the southern outskirts of Cairo. Until the late 1950s Helwan was famous as a winter resort for the upper classes, due to its dry, warm weather in addition to obtaining a reputation of a health resort because of its natural mineral water springs (sulphur). It was composed of an urban centre surrounded by agricultural land. In the late 1950s it was decided that Helwan would become the industrial base of Cairo. Various middle to heavy industrial factories were located there, such as Helwan Iron and Steel public factory, and Helwan Portland Cement. Housing was needed to accommodate the massive number of public workers employed in those factories. Helwan Economic Housing was one among other public workers' housing project which were erected during the early 1960s. Helwan Economic Housing site covers about 42 hectares and contains about 6800 housing units. Less than half of them are three roomed flats, and about half of them are two roomed flats (Tipple et al, 1985:25), in addition to a limited number of one roomed flats. The built up area covers about 21% to the total ground area (Fig.3.4).

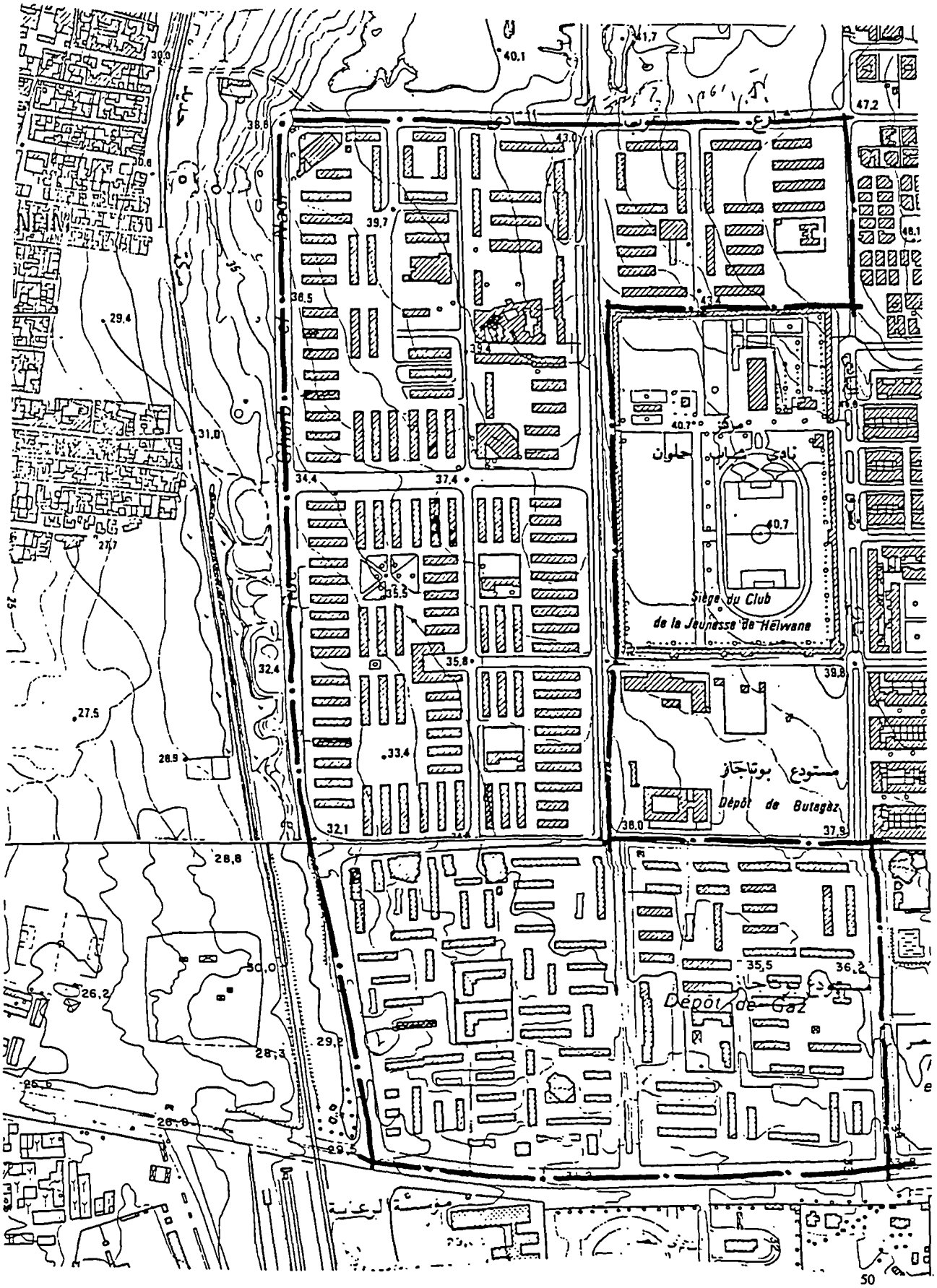



Fig. 3.4 Helwan Economic Housing - Site layout.

Picture 3.1 Multi-storey extensions in Helwan.

Picture 3.2 Multi-storey extension in El Tebeen.

The housing consists of five storey walk-up blocks of flats, usually arranged in parallel rows. That monotonous arrangement was sometimes discontinued allowing the existence of a middle open space.

In the case of Helwan Economic Housing eight households were interviewed. It was attempted as far as possible to cover the different housing types as well as different flat positions, which was thought to have an influence on the extension process. For example, the sample contained three ground floor flats, two fourth floor flats and three middle floor flats. Also two corner flats (end of block flat) were included in the previous eight households sample. In terms of flat size, three flats were three rooms, four were two roomed and one was one roomed. In Helwan Economic Housing most of the blocks have been already extended. Five storey extensions which entirely cover the initial facade is the common form of extensions in Helwan. Normally this form of extension requires the collaboration of the five households sharing the same vertical section of the block. in other words, it requires a certain degree of communal initiatives (Pic.3.1). The extensions usually are built on one side of the block, sometimes they would appear on both sides. Now, extensions are being increasingly added to the blocks' corners. Ground floor attached gardens are often established when possible. Mature 7-8 year old trees can be noticed in those gardens. The extensions are usually painted and decorated. The levels of maintenance and cleanliness of exterior public spaces varies a lot from one

space to another. This state of affairs is due to different factors. Sometimes it is due to users' self initiatives; in other cases unacceptable conditions are created due to the failure of the sewerage network to cope with the pressure on the inefficient rubbish collection system.

**Logic behind the choice**

Helwan Economic Housing was chosen mainly because of the availability of previous literature discussing the extension phenomenon in this project, which helped as a useful tool for directing attention towards certain points which required further investigation. It also was quite reliable as a source for some qualitative information which played a consolidatory role for such a qualitative case study.

**b) El Tebbeen Marazzik Housing.**

Before May 1954 El Tebbeen was just one among other villages of El Giza Governorate. El Tebbeen lies at approximately ten kilometres to the south east of Helwan. In May 1954 if was decided that the Egyptian Company for Iron and Steel would be established in El Tebbeen. Consequently, about 2000 farmers had to be evacuated from their land, to give space for the erection of the company. Furthermore, about 630 houses were demolished for the benefit of constructing El Tebbeen Workers' City to house some of the public workers in El Tebbeen and Helwan factories (Fathy, A., 1987:147). El Tebbeen Workers' City consists of:

1. El Tebbeen Mazzarik Housing which consists of 2030 housing units which were erected in 1965, plus an additional 1698 housing units which were constructed in the late 1970s;

2. The New Steel Housing which consists of 350 housing units constructed in 1970; and

3. The Old Steel Housing which consists of 500 high income level housing units, allocated for the engineers and administrative staff of the Iron and Steel Company.

**Logic behind the choice.**

El Tebeen Marrazik Housing ( Fig 3.5 ) was selected as a case study because it was built - more or less- within the same period which both Helwan and the third case study (Nasser Popular Housing) were built in. Furthermore, the fact that the opportunity to be introduced by a mutual acquaintance to the interviewed households was available, enhanced immensely the attractiveness of this choice. As a result of being introduced to the interviewed households a more relaxed and trusting atmosphere was created which helped substantially in obtaining detailed and sometimes personal information. Especially in interviewing the contractor the mutual acquaintance was considerably valuable, previous failure to obtain information from interviewing any contractor has proved that. Figure 3.6 illustrates the relationship among the interviewee and the mutual acquaintance.

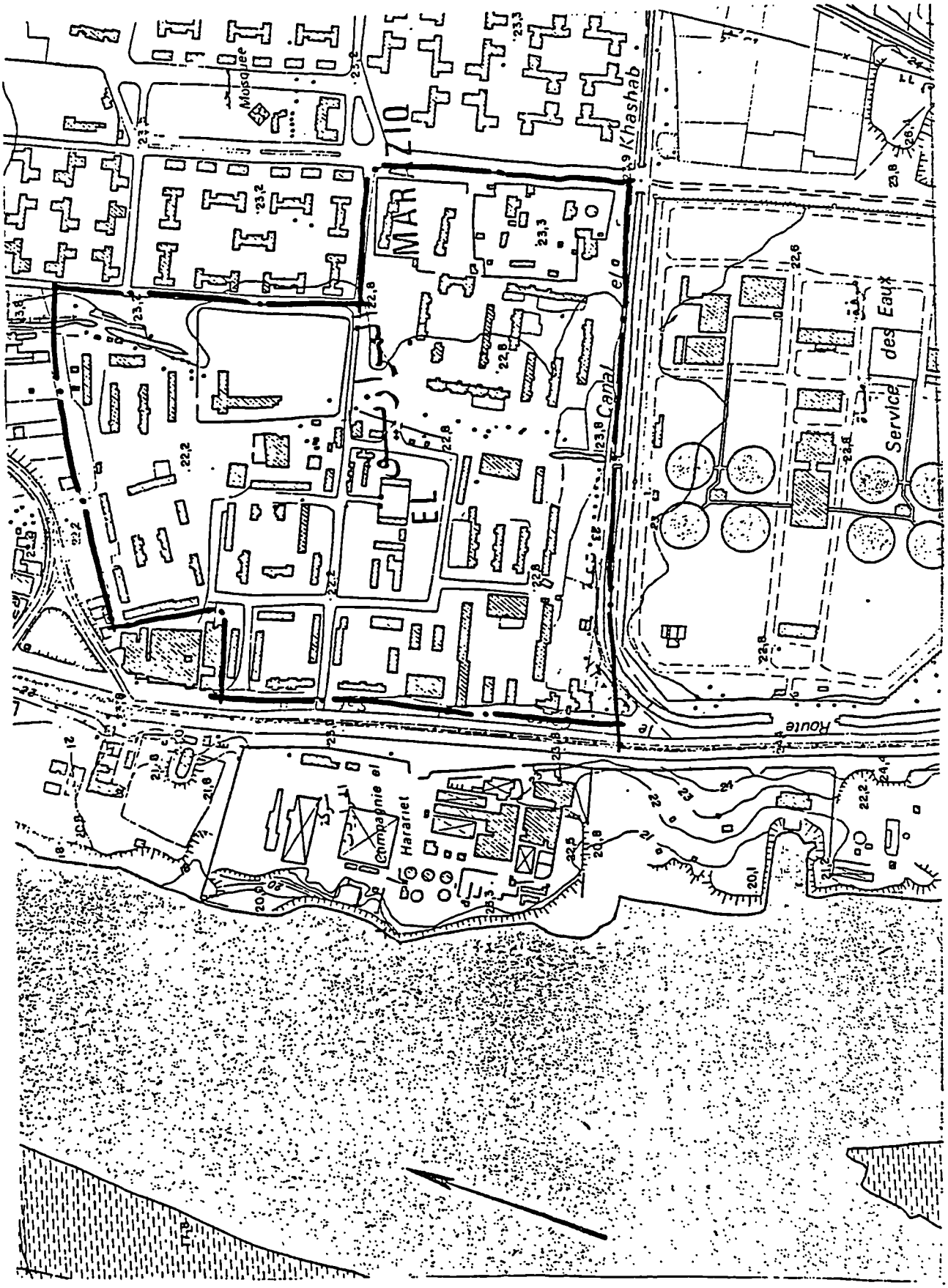



Fig. 3.5 El Tebeen Mazzarik Housing - Site Layout.

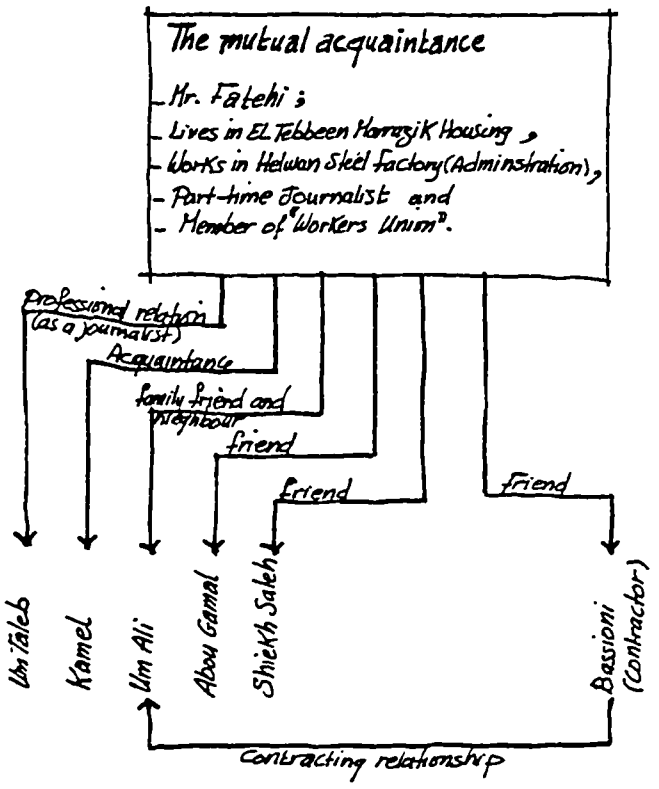



Fig 3.6 Network of relationships among the interviewees and the mutual aquaintance in El Tebeen Case Study.

The site area (Fig 3.5) covers about 24.5 hectares the built up area covers about 10% of the ground area, which is a very low built up coverage. Very few public facilities are provided, mainly schools, some shops and a food cooperative. El Tebeen extensions are basically the same multi-storey communal type as in Helwan. The contractors who are working in Helwan are the same contractors who are working in El Tebbeen. The extensions built by El Tebeen users are very similar in type, design and size of those built by Helwan users. ( Picture 3.2 )

The one roomed flats represented a considerable share of the housing provision in El Tebbeen Marrazik housing. Actually more than a third of the flats are one roomed. however, acknowledging as many different housing types and flat positions as possible, was not considered any more as a target in the selection of El Tebbeen sample as it

was before in Helwan. It was more important in this case to get closer to the socio-economic and culture milieu of the household through more intimate and free discussions. A total of five households were interviewed in El Tebeen.

The responsible local authority was the same local council for Helwan and El Tebbeen, so, only one interview was required.The contractor too was operating in both Helwan and El Tebbeen so the information obtained from him were considered to be sufficient to cover both cases. The contractor was interviews while sitting in a coffee shop on the main road of Cairo - Helwan and El Tebbeen, which seemed to be the usual place where he could be found in this time of the day. Many of his employers were attending the discussion and occasionally interfering with the dialogue.

c) Imbaba Nasser Popular Housing.

Imbaba is almost a central area of Cairo. It is across the Nile to the west of the modern administrative centre of Cairo. Across the eastern bank of the Nile and opposite to Imbaba lies the Island of Zamalek, one of the most prosperous quarters of Cairo. Imbaba is also surrounded form the west and the south by two middle and high ** quarters: El Azouza and El Mohandseen. Towards the north, traces of remaining agricultural land can be seen. Nasser Housing consists of 1050 housing units. It is one among two other popular housing schemes [1], which were erected in this site by El Giza Governorate (Fig.3.7). The area of

---

1. The two other schemes are Aziz Azet housing built in the 1970s and the New Imbaba Housing built in the 1980s.

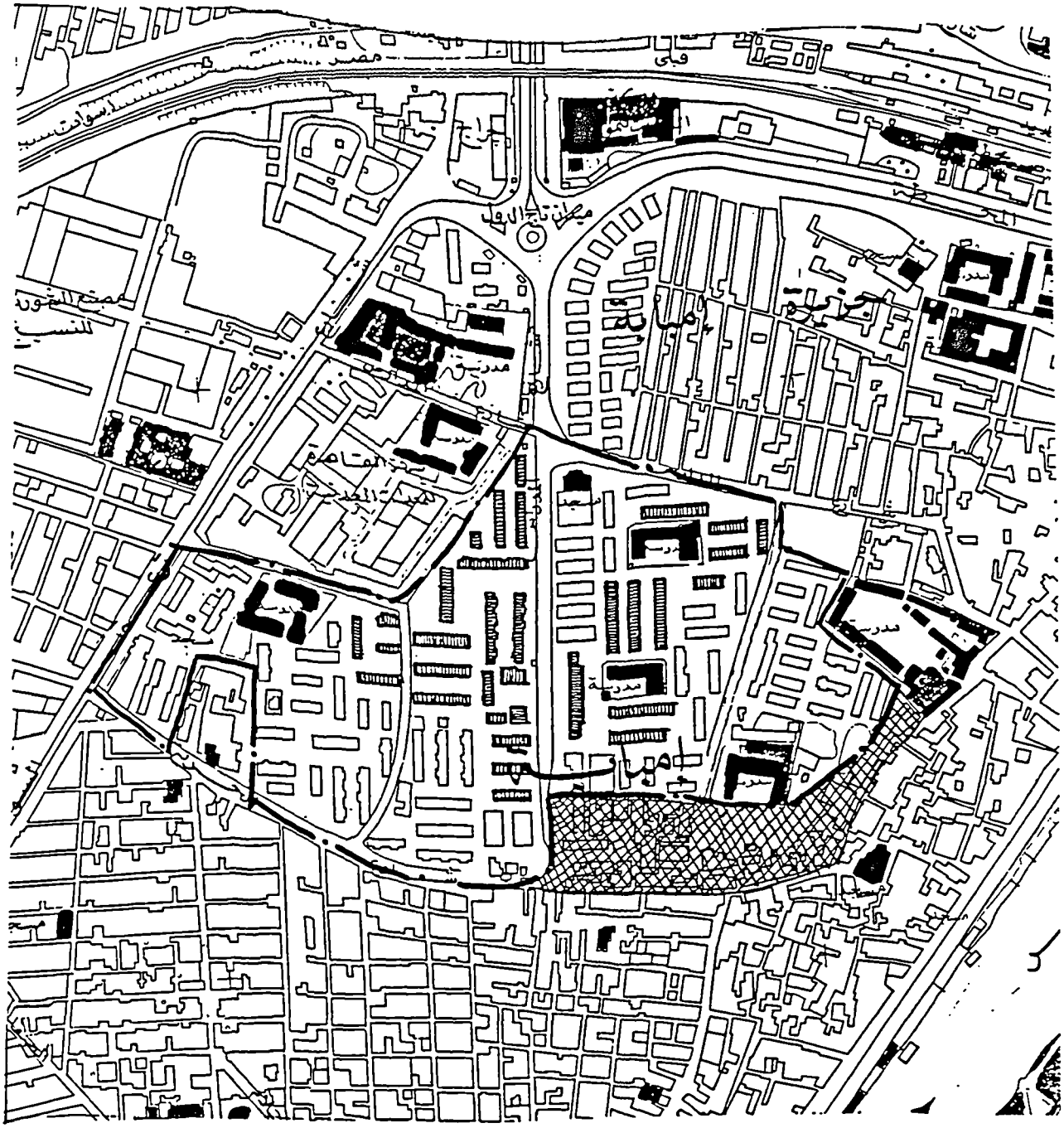



Fig 3.7 Imbaba Popular Nasser Housing - Site Layout

Picture 3.3 Individually built extensions in Imbaba.

the site is about 12.5 hectares. The housing covers about 28% of the ground area. It is quite obvious that no attempt was made to provide any comprehensive layout planning. Actually, the growth of this public housing estate since the 1960s has been accomplished by the gradual acquisition of land and the successive clearance schemes. Futhermore, until the present moment, the public housing settlement is still growing in area on the account of the neighbouring private land uses. The extensions form in Imbaba is quite different from that of Helwan and El Tebbeen. In Imbaba the users of the ground floor flats would extend their flats individually on the account of the open space by the gained space is usually very small or minimal, especially if compared to Helwan and El Tebbeen cases. The fourth floor users build their extension on the roof, while the middle floor users are left

with the only feasible solution, which is the construction of projecting extensions. Of course, the intensity of occurrence of the extensions is much lower in Imbaba than in Helwan or El Tebbeen.

**Logic behind the choice.**

Nasser housing was chosen because it was built within the same period in which Helwan and El Tebbeen projects were built. Most importantly it was chosen because of the appearance of frequent and sometimes rather unique examples of individually built extensions (Picture 3.3), in spite of the strict and threatening attitude of the responsible local authority towards such extensions. In other words, Nasser housing was chosen because it offers a different form of extensions which was expected to be a reflection or a resultant of a framework which is different to that of Helwan and El Tebeen cases.

So the hypothesis behind this choice was that a different extension form is cause by the existence of a different framework behind the process. It was also hoped that Imbaba would provide a contrasting case against which the multi-storey extension process could be better illustrated and appreciated.

Five households were interviewed in Imbaba, three among them live in one roomed flats. More attention was given to this type of housing because it witnesses more extensions than any other type. No contractor was interviews

because this type of individual extensions does not involve a contractor, only a hired labour and sometimes it is totally self-built. Four out of the five households has built extensions, whilst the fifth had only made internal changes to the flat layout. This case was included in order to help demonstrate over-crowding levels which residents living in such small flats have to contend with. The remaining four cases represent some of the largest extensions found in Imbaba.

Memebers of the local authority staff were also interviewed. It is important to note that Imbaba Nasser housing suffers from a deterioration of environmental conditions far more than Helwan or El Tebeen. Rubbish collection seems to be a more serious problems than in the previous two projects. The situation is made worse by the setting of some emergency temporary shelters for the homeless in some of the public spaces in the project. The temporary shelters consist of box-like rooms which are built from cardboard and extended by their occupiers with all the available scrub materials. Immense problems were created by locating those emergency settlers within the settlement. At presenty the area has acquired a bad reputation because of the spread of crime of drugs.

### 3.3.2 The initial provision

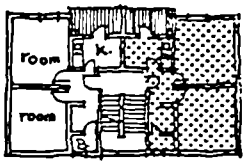
Figure 3.8 illustrates the six different housing types which were included in this study. The houses in the three case studies can be divided into two main categories:

1. One roomed flats with gallery access; Type e,f; and

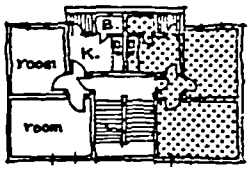
2. Two or three roomed flats with staircase access: types a,b,c,d. Helwan case study covered types a,b,c,d and e. El Tebbeen case study covered types d, e and f, and finally Imbaba covered only types d and e.

## 3.4 Introducing the transformations

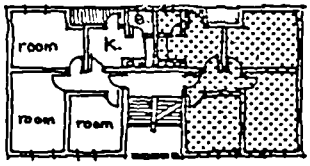
In this part the 18 extensions which were investigated will be illustrated by presenting each of their plans in addition to relevant photographs and drawings.



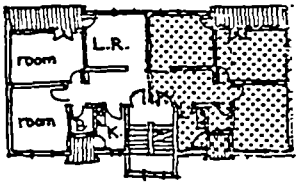

*Plan type (a)*



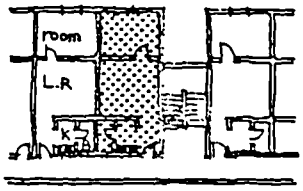

*Plan type (b)*



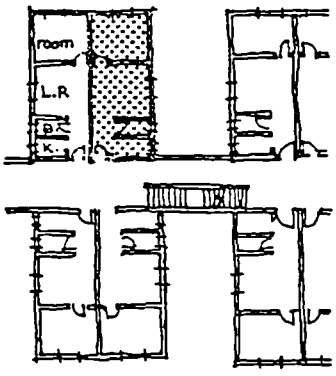

*Plan type (c)*




*Plan type (d)*




*Plan type (e)*




*Plan type (f)*

Fig 3.8 The Initial Plans

| | | |
|---|---|---|
| Helwan Case Studies | household formulation | Initial area = 27.3m² |
| plan type (e) | 50 + 45 / 12 15 18 20 + 24 | extended area = 13.8m² |
| Ground floor | | % of area increase = 50% |

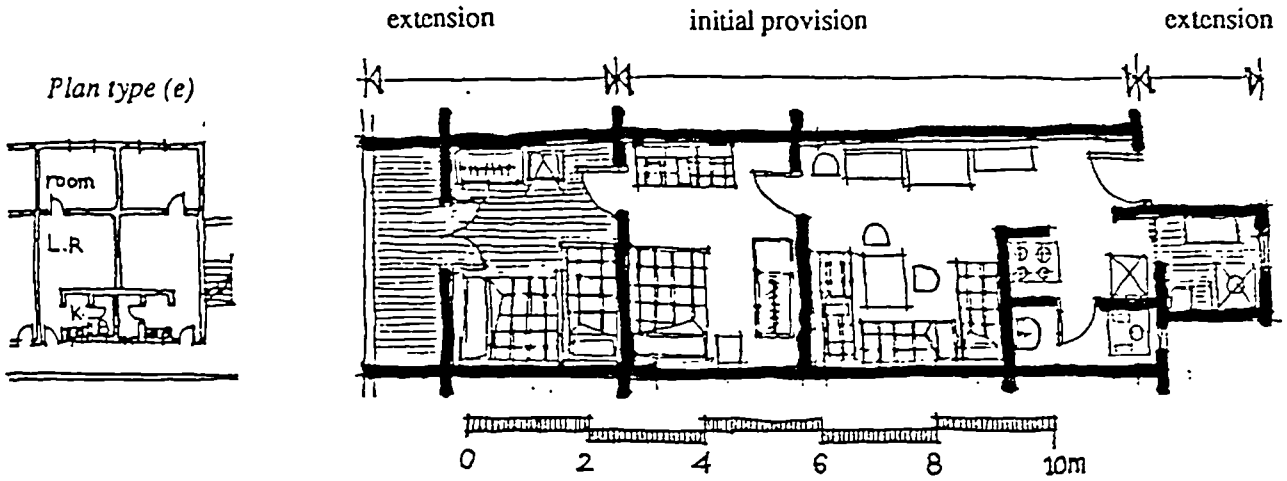
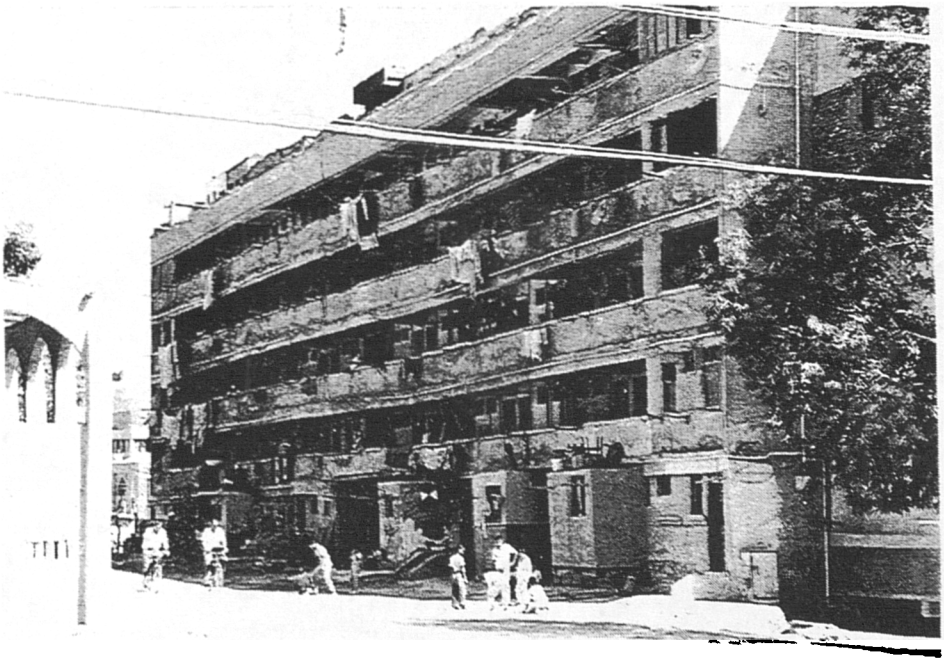
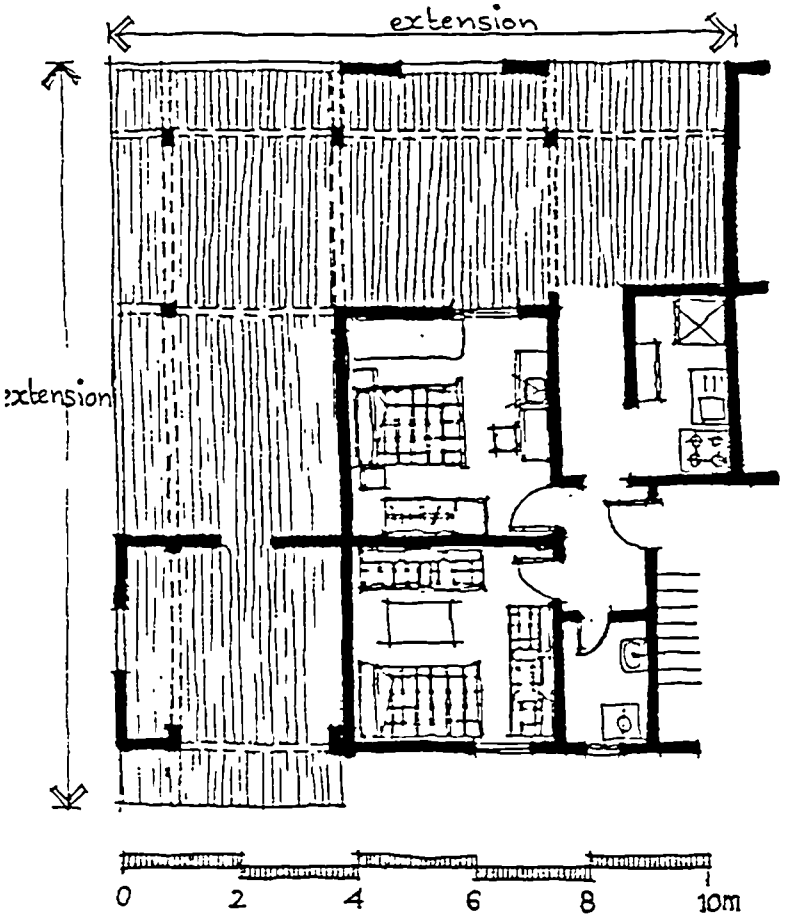


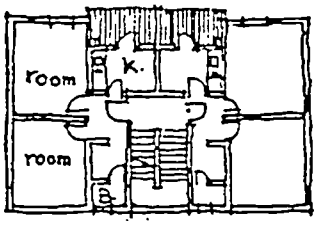

Fig.3.9 Plan of Hassan's housing unit. (Ground floor).The extension consists of one room and a balcony within the five storey communally built extension to the rear of the block. The structure is a concrete skeleton frame. Hassan also has built a front extension out of load bearing brickwork for a kitchen.



Picture 3.3 The Front Extension.

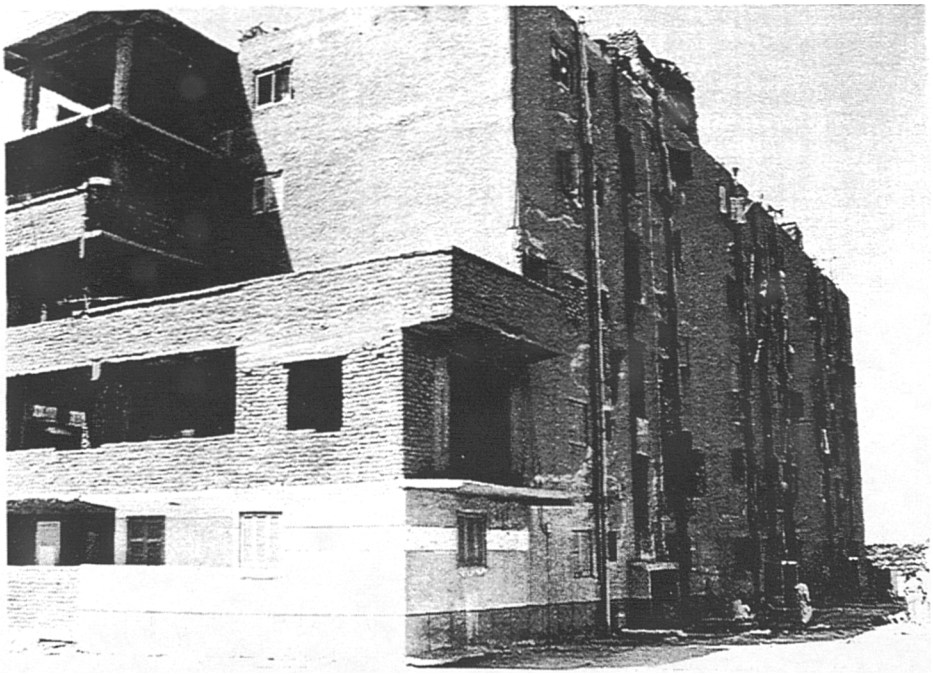
| | | |
|---|---|---|
| Helwan Case Studies | household formulation | Initial area = 35.8m² |
| plan type (a) | 45 + 35 / 8 13 15 | Present extended area = 56m² |
| 1st floor | | % of area increase = 141% |



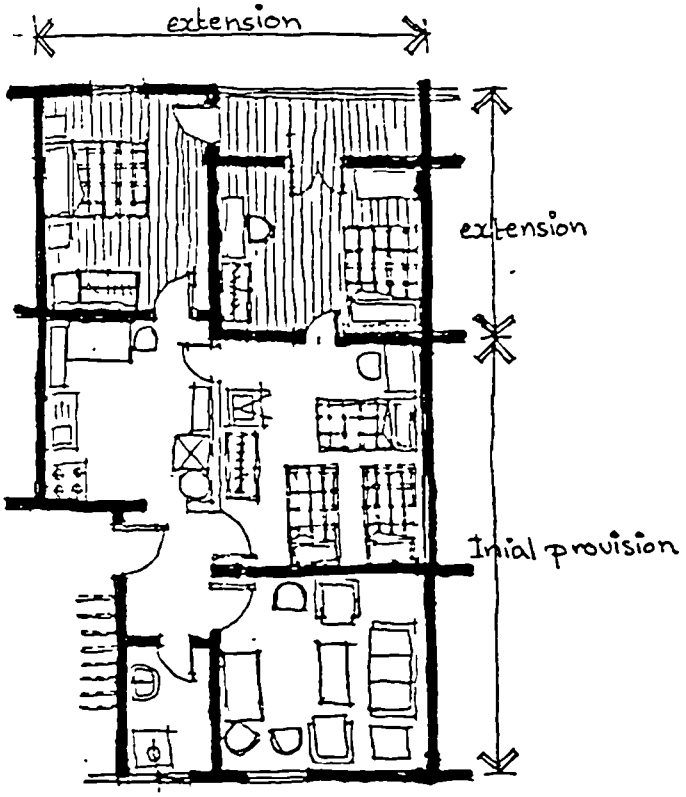

*Plan type (a)*

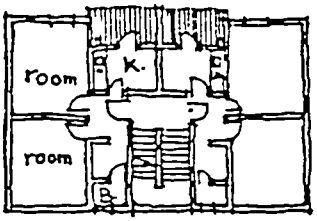
Figure 3.10 The Plan of Ahmed's housing unit. At the present the extension consist of a concrete skeleton and a few external walls.



Picture 3.5 The extension of Ahmed showing the unfinished facade.

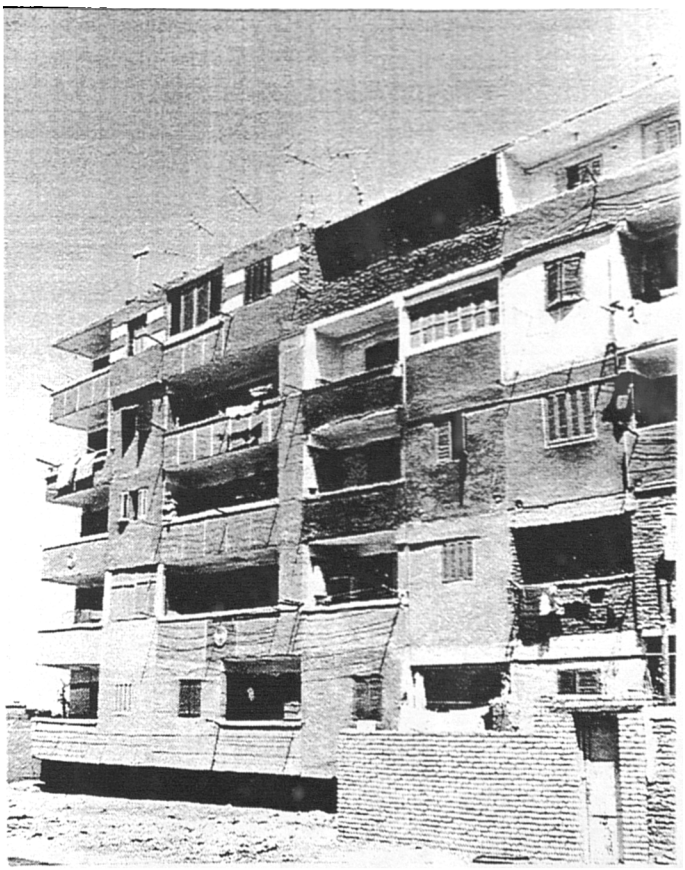
| Helwan Case Studies | household formulation | Initial area = 35.8m² |
|---|---|---|
| plan type (a) | 55 45 18 21 20 24 26 | Extended area = 17.9m² |
| 2nd floor | | % of area increase = 50% |



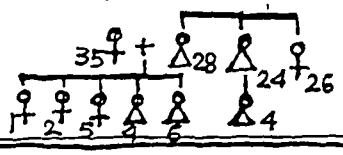



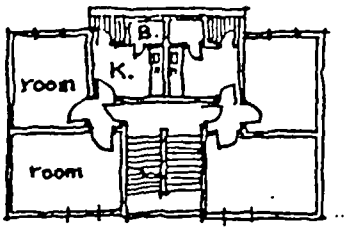

*Plan type (a)*

Fig. 3.11 The plan of Abou Ali's housing unit. The extension consists of two bedrooms and a balcony. One of the rooms is for the parents and the other for the two girls, leaving one of the original rooms as a guest room.

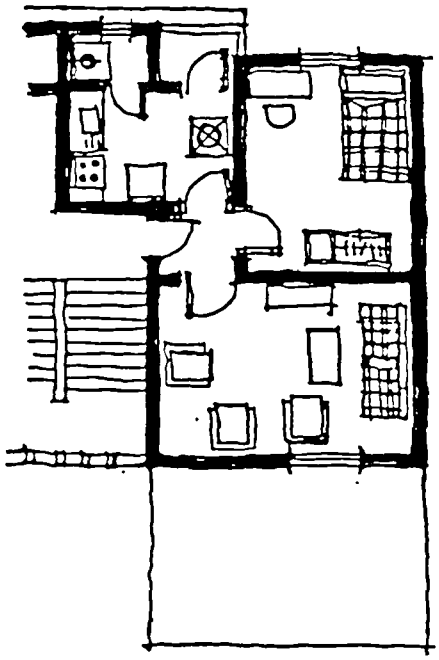



Picture 3.6 The facade of the extension.

| | | |
|---|---|---|
| Helwan Case Studies | household formulation | Initial area = 33.6m² |
| plan type (b) |  | Present extended area = 34.4m² |
| 4th floor | | % of area increase = 102% |




*Plan type (b)*



The inital provision.

The extension on the roof.

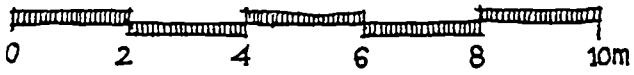
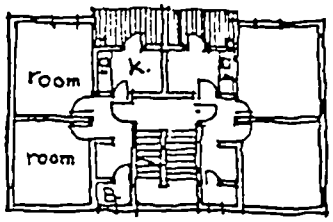



Fig. 3.12 The plan of Samir's housing unit. The extension consists of a separate housing unit built on the roof, identical in plan to the initial provision. A flight of stairs has to be constructed to give access to the roof. The flat on the roof is occupied by Samir's married sister and her family. The sister's husband financed the construction. Samir still has the opportunity to extend his fourth floor flat horizontally as the neighbours beneath have aleady extended providing him with the base to build on. He is planning to extend in the next year.

| | | |
|---|---|---|
| Helwan Case Studies | household formulation | Initial area = 35.8m² |
| plan type (a) | 45 ♀ + ♂ 40 | Present extended area = 20.4m² |
| Ground floor | ♀ 11 ♀ 13 ♀ 16 ♂ 17 | % of area increase = 57% |




*Plan type (a)*

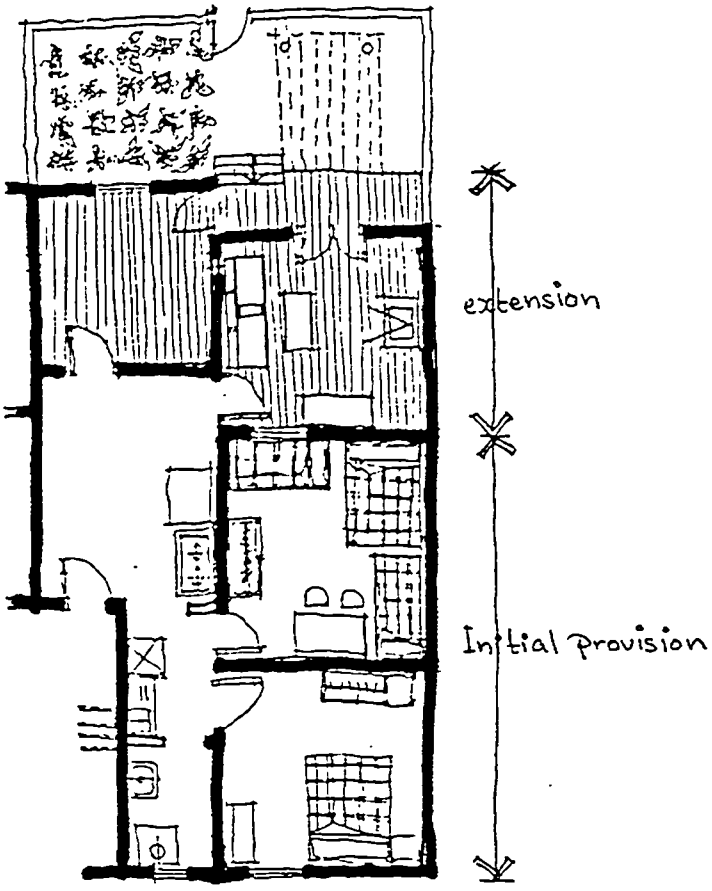
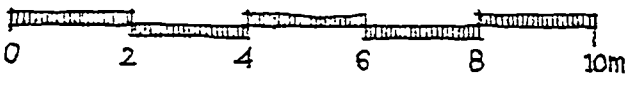
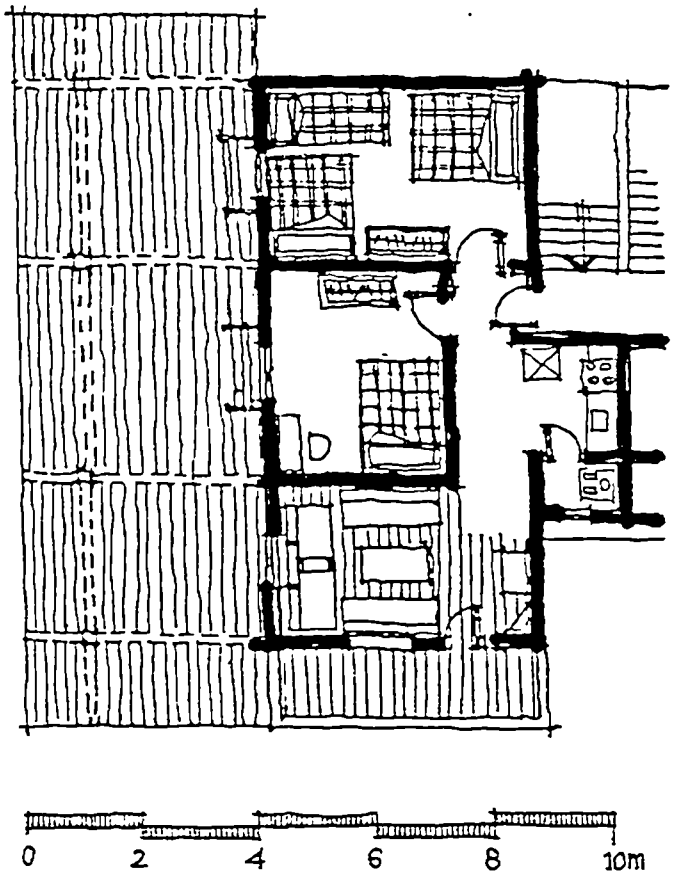


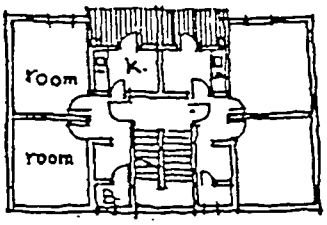

Fig 3.13 The plan of Mahmoud's housing unit. The extension consists of two rooms in addition to a garden where vegetables are being grown. A part of the garden is shaded by a corrugated roof. Mahmoud at the time of the interview was decorating the extended room.




Picture 3.7 The garden door.

| Helwan Case Studies | household formulation | Initial area = 35.8m² |
|---|---|---|
| plan type (a) | 63 ♀ + ♂ 50 <br> ♀ ♀ ♀ ♂ ♂ ♂ <br> 9 14 16 11 13 18 | Present extended area = 58m² |
| Ground floor | | % of area increase = 162% |



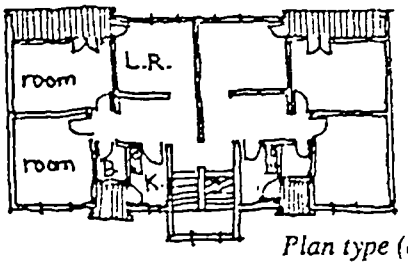




*Plan type (a)*

Fig.3.14
The plan of El Said's housing unit. The extension consists of a finished room a balcony and concrete skeleton frame for a further three rooms. The front side extension was built about nine years earlier than the side extension which is shown in thwe picture below as a frame structure only. When the site was revisted a year later the extension was finished and one of the new rooms was turned into a shop.

Picture 3.8 The extension at the side of the block.

| | | |
|---|---|---|
| Helwan Case Studies | household formulation | Initial area = 42.6m² |
| plan type (d) | 62 ♀ + △37 ♀ 8 ♀ 9 △ 11 | Present extended area = 20m² |
| 4th floor | | % of area increase = 47% |




*Plan type (d)*

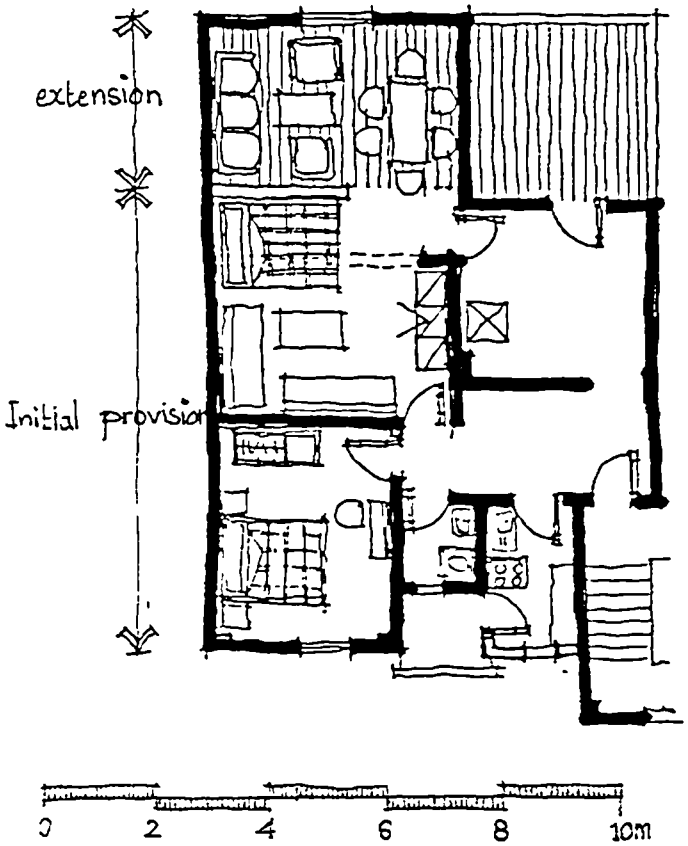
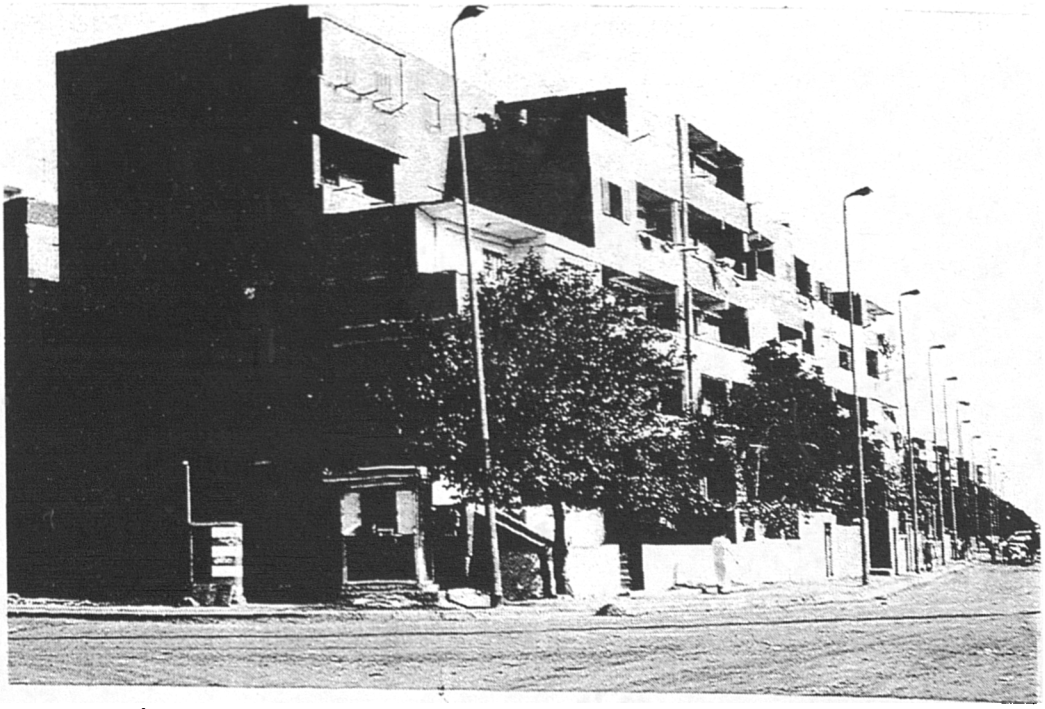
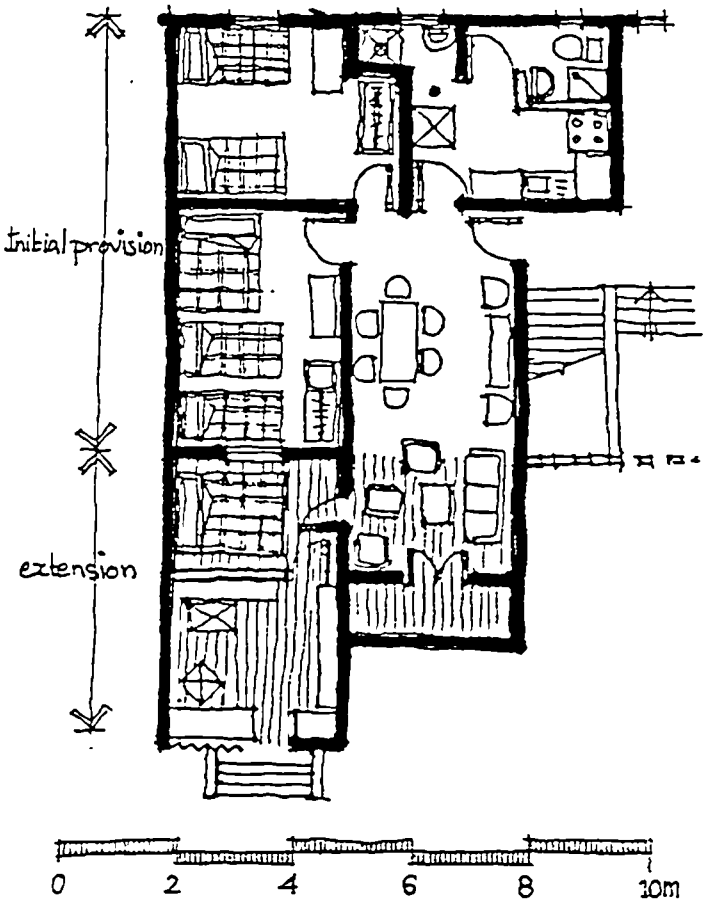


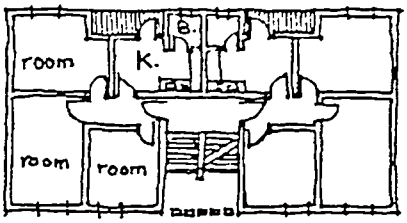

Fig 3.15 The plan of Abul Rahman's housing unit. The extension consists of one room and a large unroofed terrace where an additional room will be constructed in the future. The structure of the extension is of load bearing brick work.



Picture 3.9 Abdul Rahman's extension.

| Helwan Case Studies | household formulation | Initial area = 45m² |
|---|---|---|
| plan type (c) | 45 | Present extended area = 18m² |
| Ground floor | 12 15 16 20 24 26 | % of area increase = 40% |



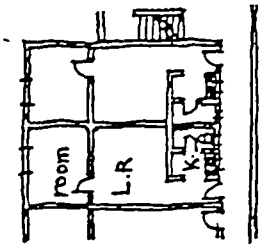




*Plan type (c)*

The plan of Um Abdou's housing unit. The extension consists of a small bedroom, and an enlargment for the living room, balcony and a shop. The small bedroom is where Um Abdou currently sleeps. The plan reflects a middle class layout with a living-dining facility. Her two sons have university degrees.

Picture 3.10 Um Abdou's shop.

| | | |
|---|---|---|
| El tebbeen Case Studies | household formulation | Initial area = 27.3m² |
| plan type (e) | 25 30 3 5 7 8 12 9 | Present extended area = 11.3m² |
| 2nd floor | | % of area increase = 41% |




*Plan type (e)*

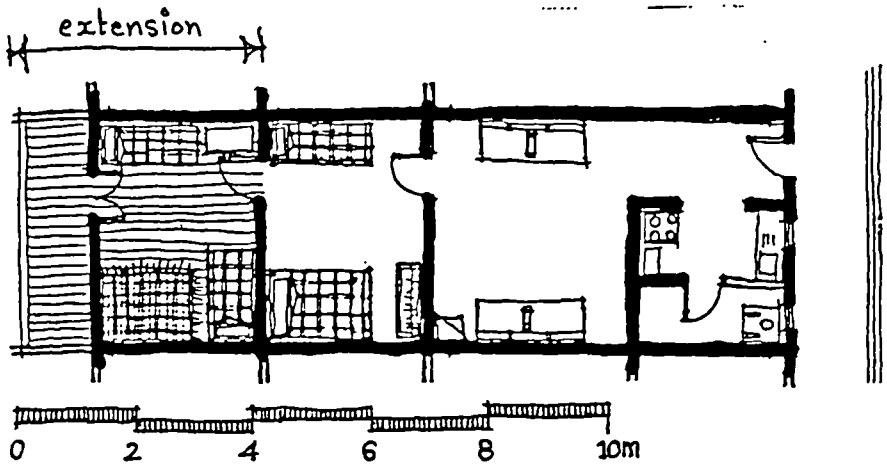
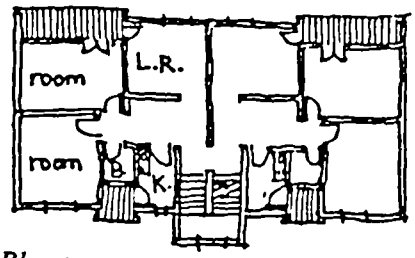



Fig 3.17 The plan of Um Taleb's housing unit. The furniture is very basic and simple. In spite of Um Taleb's difficult financial circumstances she managed to extendc her flat. She has received some charity money and the contractor has been lenient with her on repayments.


Picture 3.11 A national newspaper cutting (covering the charity scheme) which describes Um Taleb's poor conditions of living (left) and a drawing of her in the living room (right)

| | | |
|---|---|---|
| El Tebbeen Case | household formulation | Initial area = 42.6m² |
| plan type (d) | 65 89 | Present extended area = 33.6m² |
| Ground floor | 5 13 7 9 12 15 | % of area increase = 79% |




*Plan type (d)*

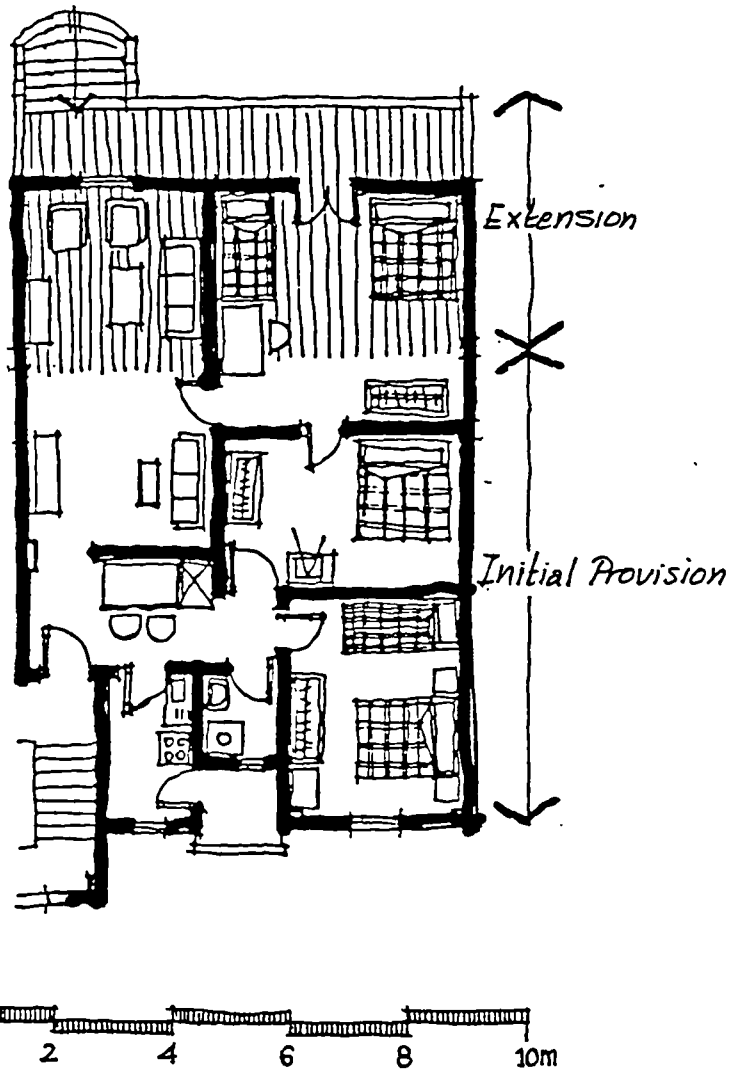
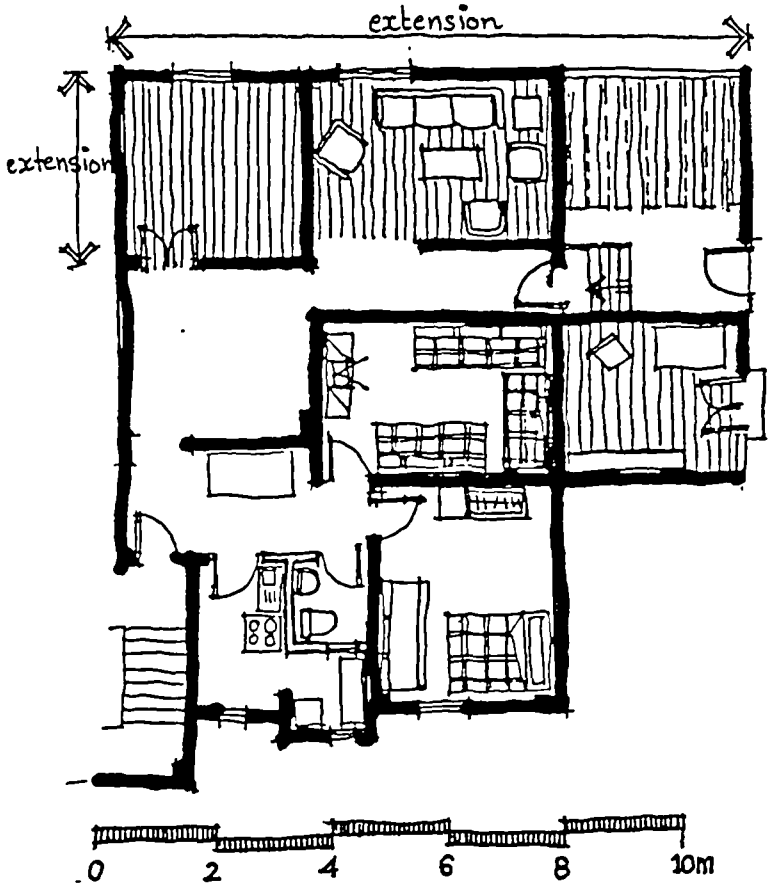
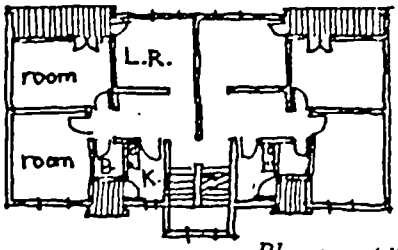



Fig 3.18 The plan of Um Ali's housing unit. The extension consists of one bedroom - an elargement for the living room and balcony. Um Ali's father occupies the middle right side room of the flat. He is also the original owner of the flat.

| El Tebbeen Case Studies | household formulation | Initial area = 42.6m² |
|---|---|---|
| plan type (d) | 66 ♀ + △50 | Present extended area = 38.5m² |
| Ground floor | △+♀ ♀ ♀ ♀ ♀ ♀ △ △ △ 23 30 16 19 23 25 27 15 17 21 | % of area increase = 90% |



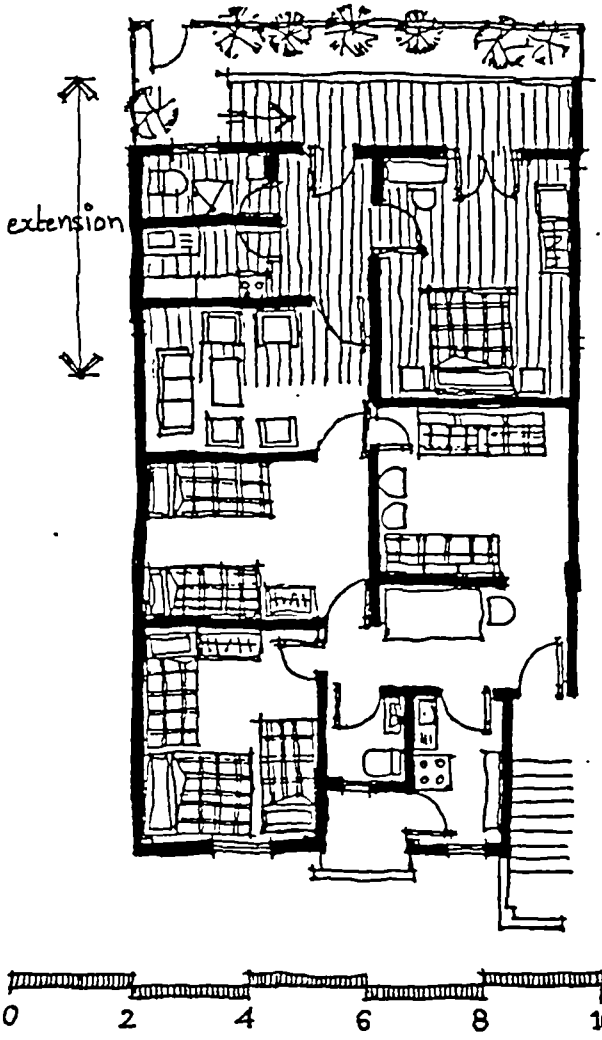



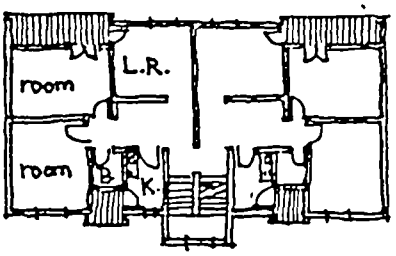

*Plan type (d)*

Fig 3.19 The plan of Sheikh Saleh's housing unit. The extension consists of two rooms, a shop and a roofed storage area. The family has already started to move to a newly built house in their home village. The flat will be left for the eldest two sons of Sheikh Saleh who are employed in two different factories in Helwan.

The eldest son and his wife in the guests room.

| El Tebbeen Case Studies | household formulation | Initial area = 42.6m² |
|---|---|---|
| plan type (d) | 59 ♀ + ♂ 43 | Present extended area = 33.6m² |
| Ground floor | 22 27 14 22 23 25 16 17 20 | % of area increase = 79% |




*Plan type (d)*

Fig 3.20 The plan of Abou Gamal's ground floor housing unit. The extension consists of a large double bedroom, a kitchen, wc / washing area and entrance off a terrace/balcony occupied by eldest son and wife, whilst the living room is shared between the two families.

The new living room.

| | | |
|---|---|---|
| El Tebbeen Case Studies | household formulation | Initial area = 28.4m² |
| plan type (f) | 66 37 42 35 9 11 15 17 10 12 16 | Present extended area =14.7m² |
| 3rd floor | | % of area increase = 52% |

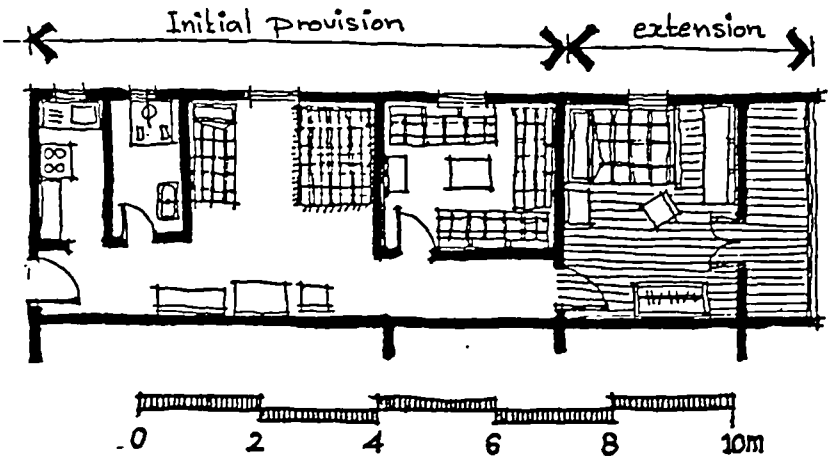
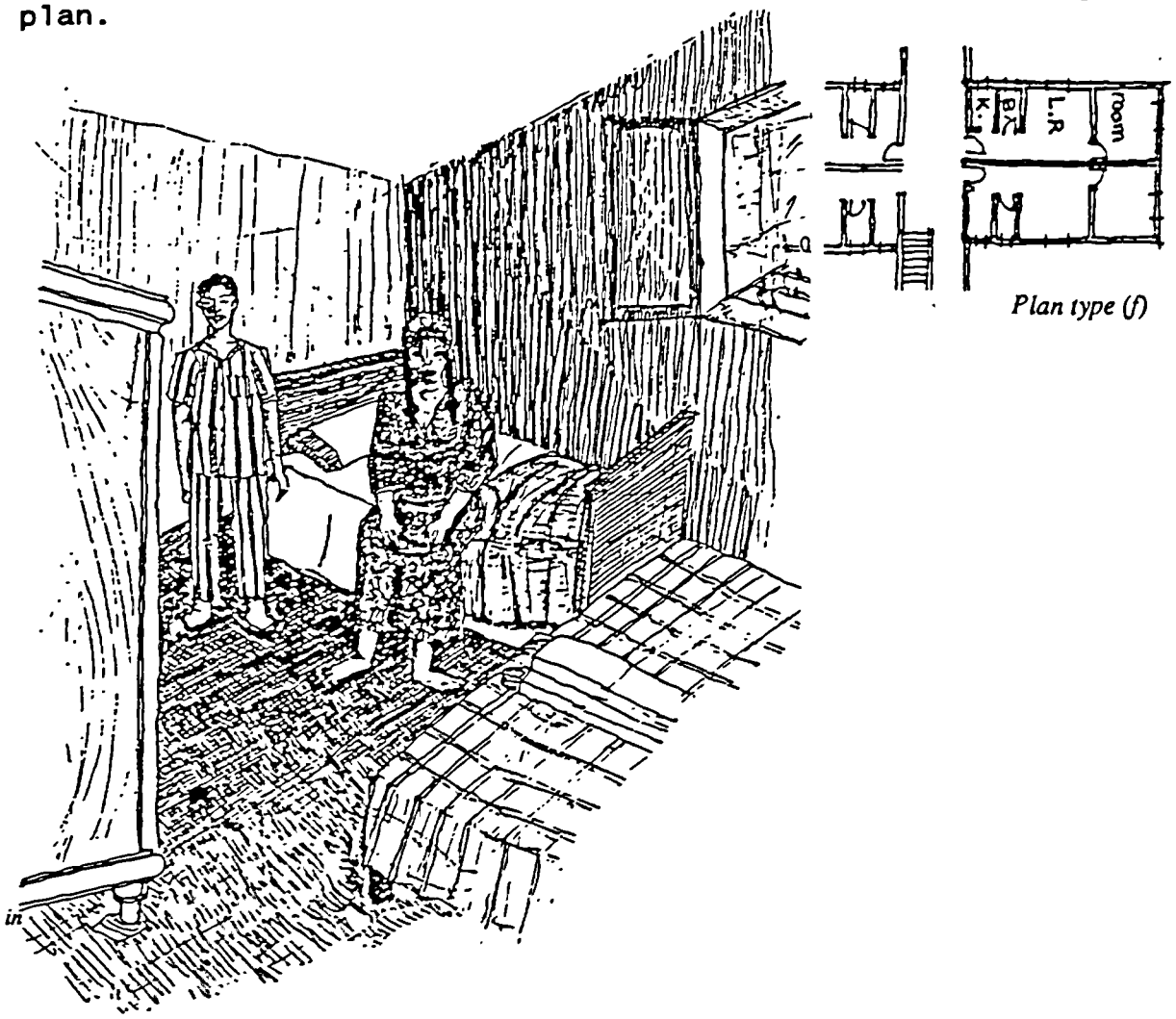
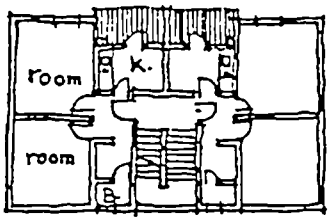



Fig 3.21 The plan of Kamel's housing unit. The extension did not effect the daylight or ventilation in the original plan.




The wife of Kamel and her son sitting in the extended bedroom.

| | | |
|---|---|---|
| Imbaba Case Studies | household formulation | Initial area = 35.8m² |
| plan type (a) | 40 ♀ + ♂ 35 | Present extended area = 19.7m² |
| 3rd floor | ♀ 6 ♀ 8 ♀ 11 ♀ 13 ♂ 12 ♂ 15 ♂ 16 | % of area increase = 55% |




*Plan type (a)*

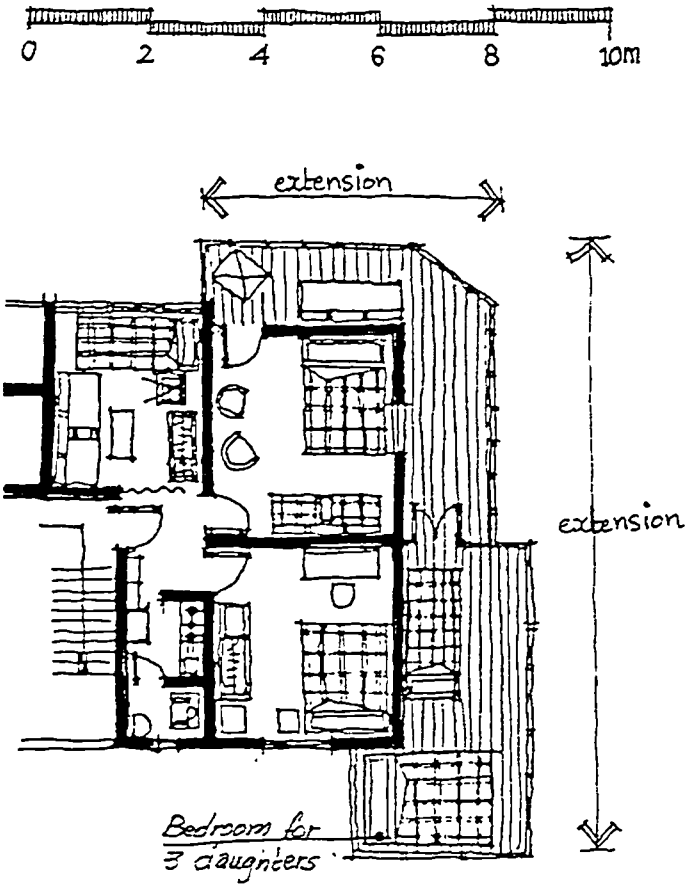
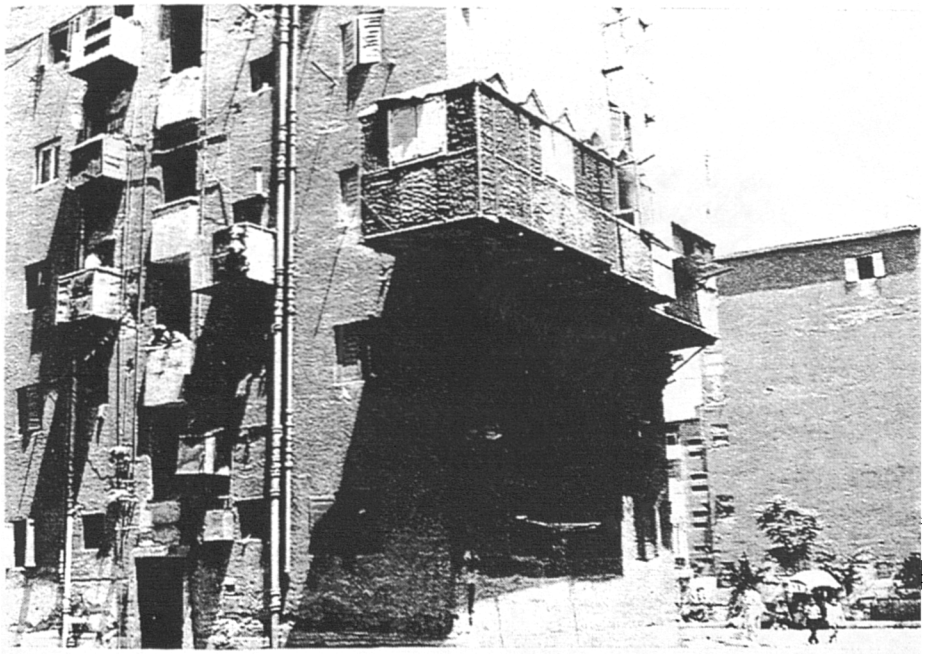
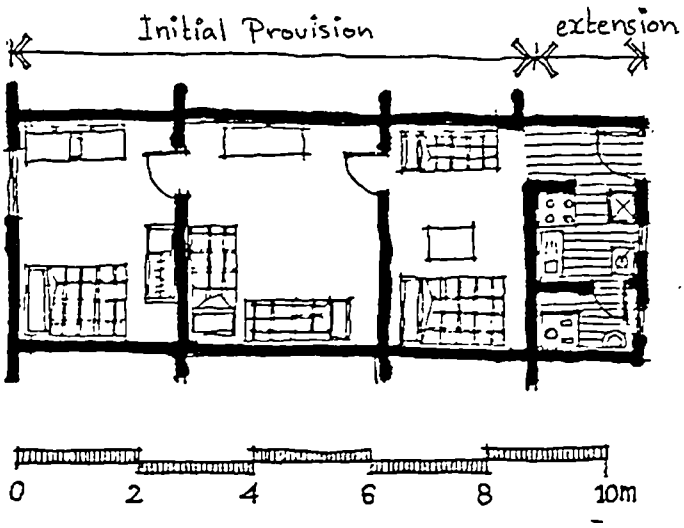


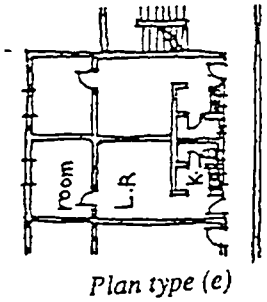

Fig 3.22 The plan Abou Nabil's housing unit. A projecting extension useing a steel framed structure constructed by Nabil himself. The extension looked striking yet structurally precarious.



Picture3.12 The project and individually built extension of Abou Nabil.

| | | |
|---|---|---|
| Imbaba Case Studies | household formulation | Initial area = 27.3m² |
| plan type (e) | 45 + 33 | Present extended area = 4m² |
| Ground floor | 11 17 14 15 | % of area increase = 15% |

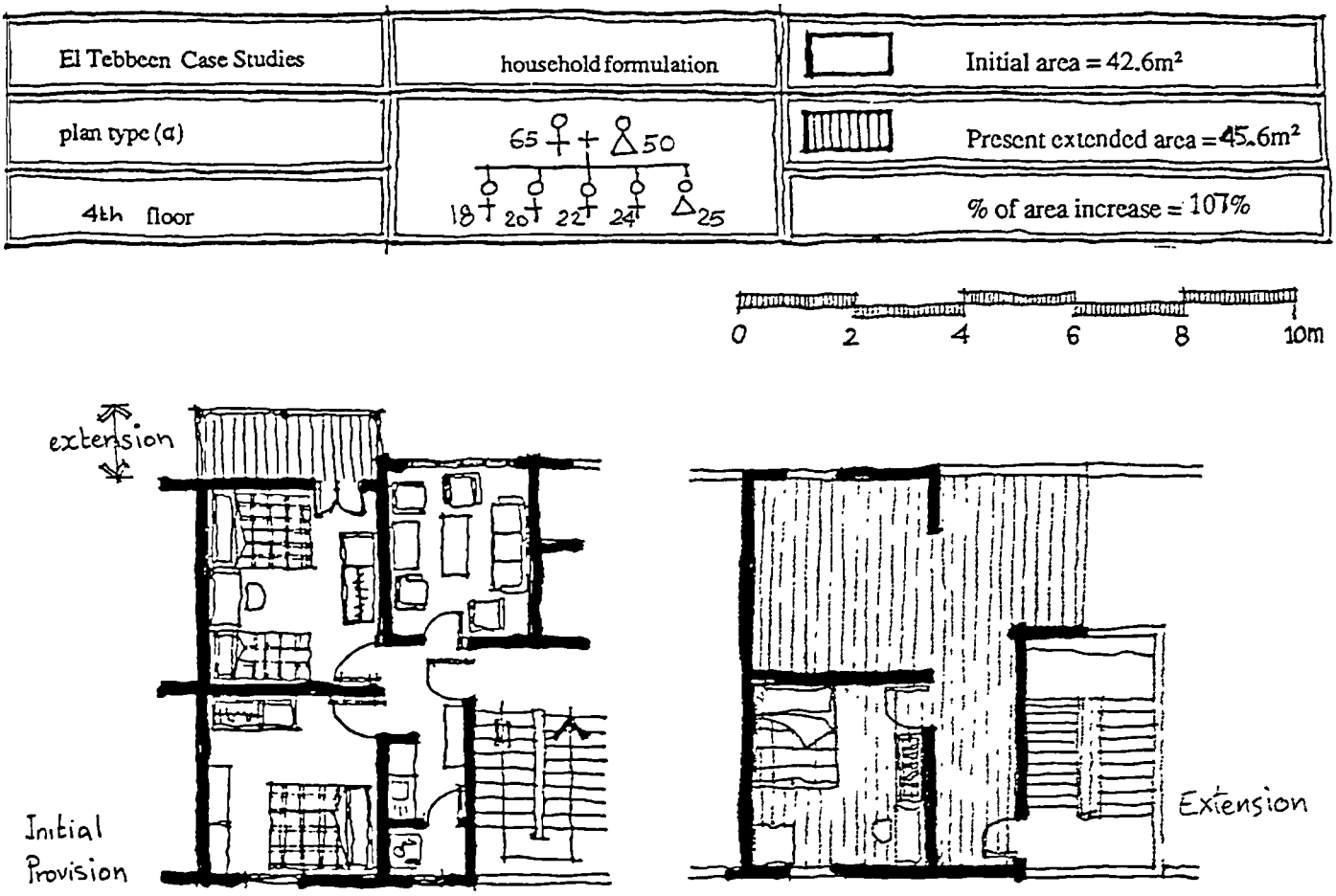


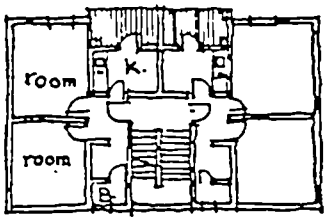

*Plan type (e)*

Fig 3.23 The plan of Abou Farag's housing unit. The kitchen and the wc were transferred to the gained area allowing a space for the bedroom..

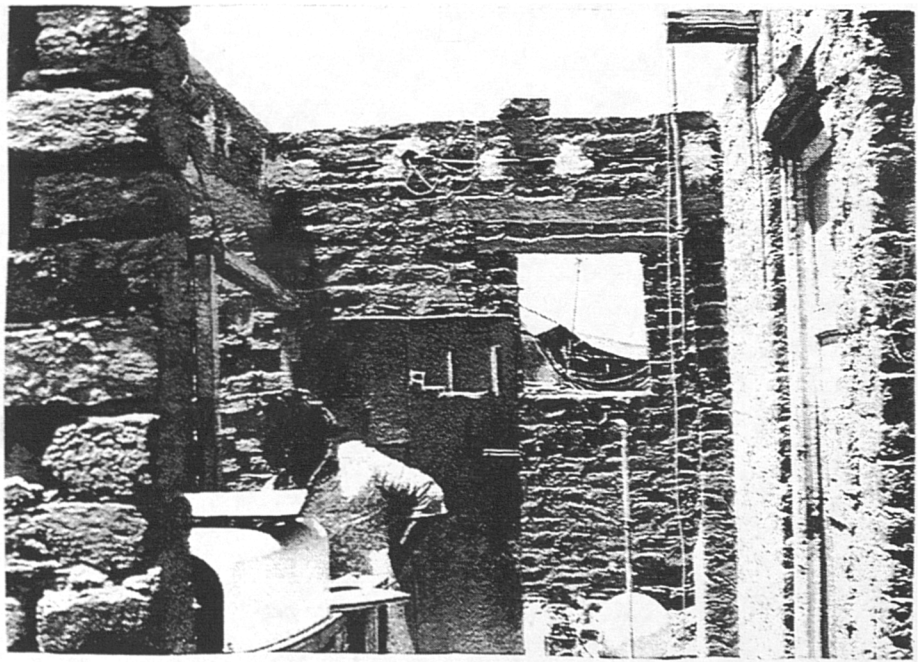
Picture 3.13 The extensions in Imbaba - gallery type access.




3.24 The plan of Abou Abdou's housing unit. The extension consists of the external walls of a flat built on the roof. Only one room is roofed by the use of corrugated sheets. A steel ladder was constructed to give access to the roof unit. In the fourth floor flat a projecting balcony was added.




*Plan type (a)*



Picture 3.14 The extension on the roof.

| | | |
|---|---|---|
| Imbaba Case Studies | household formulation | Initial area = 27.3m² |
| plan type (e) | 45 40 13 15 8 3 12 14 | Present extended area = 8.4m² |
| Ground floor | | % of area increase = 30.7% |

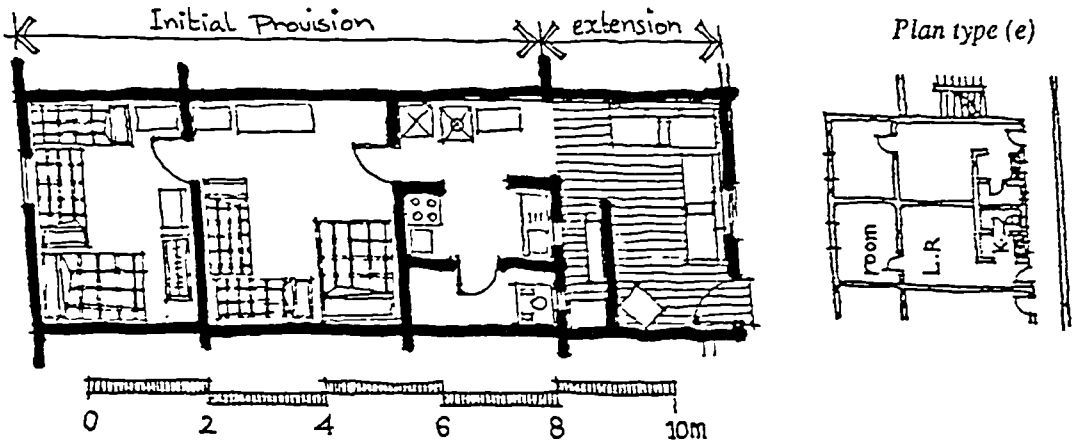
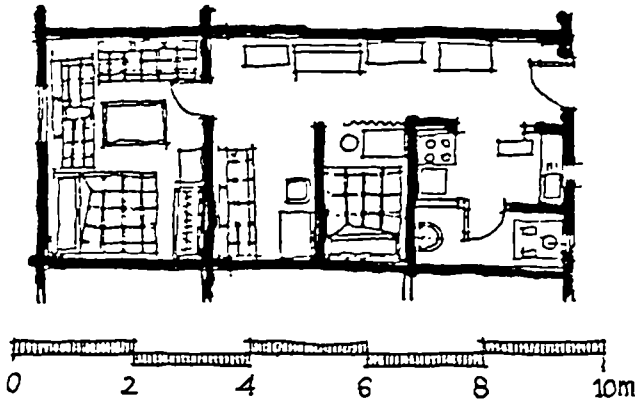
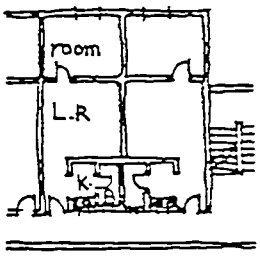



Fig 3.25 The plan of El Tabie's housing unit. A room was built at the front using a load bearing wall structure. A partition was built to screen the windows of the kitchen and the toilet which now have no external openings at all.

Picture 3.15 A view of the access balcony block showing the activites taking place immediately adjacent to the block.

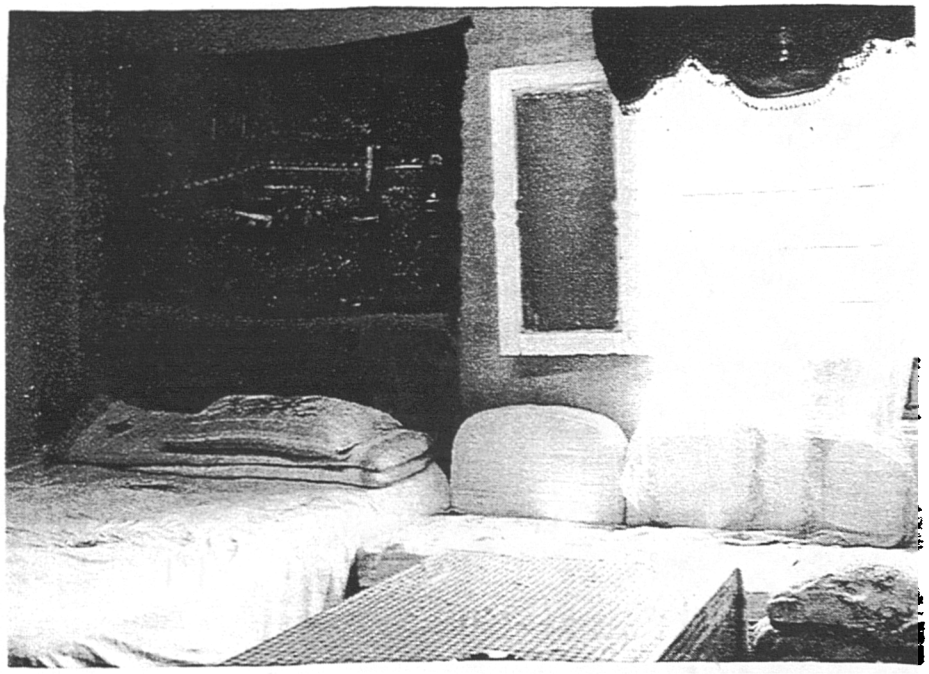
| Imbaba Case Studies | household formulation | Initial area = 27.3m² |
|---|---|---|
| plan type (e) | 61 ♀ + △46 <br> ♀11 ♀14 ♀17 △16 | Present extended area = 0m² |
| 3rd floor | | % of area increase = 0% |




*Plan type (e)*

Fig 3.26 The plan of Foad's housing unit. No extension was built, only a partition wall was built to divide the living room into two spaces.



Picture 3.16 The master bedroom where the parents and two daughters sleep. During the day it is a living /dining and study room. The roof of this block is entirely occupied by the fourth floor residents own built extension. Foad's wife complained that the roof used to function as a clothes/washing and drying area and also was used for weddings and festive occasions.

## 3.5 The identification of the actors and their roles in the transformation process.

### 3.5.1 The households in the three sites.

This part of the study is a descriptive one. The identification of the users is done by describing the different economic, social and cultural characteristics of the household. Quantitative data were used in addition to the qualitative in order to fully establish the household characteristics.The quantitative data concerning the household characteristics will be usually presented in diagrams in order to facilitate the visual grasp and comparisons. The qualitative information is presented in the form of stories which were told by, or about, the different households and which were considered to be relevant. The similarities and differences between the household characteristics of each of the three case studies will be pointed out, however the comparison between them is reserved for chapter four of the study.

a. Economic Characteristics.

1. Estimated Household Income.

HELWAN.

The estimated income (1) for each of the eight households interviewed in Helwan were as shown in Table 3.1

---

1. The income of the household was always compared with the household expenditure. When A significant difference between the two figures given by the household exists, the household income was estimated according to the declared expenditure especially according to the food, fuel, electricity expenditure. Further discussion with interviewees about type of employment, job opportunities and number of earners in the household has revealed, in most of the cases, more accurate information about the household income.

| Range of income/month | Number |
|---|---|
| 100 - 149 | 1 |
| 150 - 199 | 4 |
| 200 - 249 | - |
| 250 - 299 | 1 |
| > 300 | 2 |

Table 3.1. The ranges of household income in Helwan Economic Housing Sample

The higher income range (more than L.E 199 per month) are mainly due to the existence of more than one earner in the household. In one case, in the Um Abdou family there was an additional income from a stationery and refreshments shop. The shop occupies one of the extended rooms which is located on one of the main streets, Fig.3.16. The net profit of the shop is about E.L.20 per month. The family has also more than one earner. The deceased father's pension is about E.L 60 per month. There are also two graduated sons who work in governmental jobs. The total income of the family amounts to E.L 300 per month.

EL TEBEEN

The differences between the incomes of the interviewed households in El Tebeen were greater. (Table 3.2)

| Ranges of income | Number of households |
|---|---|
| less than 100 | 1 |
| 100 - 149 | 1 |
| 150 - 199 | - |
| 200 - 249 | 1 |
| 250 - 299 | - |
| > 300 | 2 |

Table 3.2 The ranges of household income in El Tebbeen Marrazik Housing Sample

The very low income in the Am Taleb case (E.L 70 per month) is due to the fact that there were some units (one room flats) allocated for the needy households who are not public workers. One of them is Um Taleb. She is also the only earner after the death of her husband in 1984. He was a self-employed unskilled labourer. Um Taleb earns her living as a mobile vegetable seller.

As for the cases of higher income as in the case of Abou Gamal , the estimated household income is about E.L360 per month. That high range of income is due to the existence of more than one earner. The father is a public worker, and his salary is about E.L 130. In addition to two earning sons, the elder is a public worker in the same factory as the father (Iron and Steel factory) and the second son is a skilled self-employed worker with an average income of E.L 150.

There is another inspiring family in El Tebeen who managed to increase their income substantially so that they could invest some money through buying a piece of land in their home village in Giza, where they have built a house and a small mosque. They are the family of El Sheikh Saleh. Their estimated income is about E.L 450 per month. The father is an ex-public worker in the " Cook Factory", his pension is about E.L 100 per month. The second son is an agricultural engineer who works in a governmental job, his salary is about E.L 80 per month. The rest of the sons (four sons) are all working as carpenters besides continuing their education. The family started a furniture manufacturing business in 1983 in

the extension in the ground floor flat. The average profit from this family business amounts to about E.L 300 per month.

IMBABA

In Imbaba Nasser housing the ranges of estimated incomes of the five households who have been interviewed are as shown in Table 3.3.

| Range of household estimated income | Number of households |
|---|---|
| 100 - 149 | 3 |
| 150 - 199 | - |
| 200 - 299 | - |
| > 300 | 2 |

Table 3.3 Ranges of household income in Imbaba Nasser Housing sample.

In Imbaba there was a considerable difference between the incomes of the five households interviewed. The high income in Abou Nabil's case is due to the fact that he is working as a skilled self-employed painter and a blacksmith at the same time. He is quite clever at both of the crafts and has a good reputation among his customers. Having excelled in two crafts gives him more chances for work. His estimated income is about E.L 350 per month.

In another case, Abou Abdou , the higher income of the family is explained by having more than one earner. Three of the sons are working, a driver, a waiter in a restaurant

and a preparatory school teacher. The father was a plumber working in the Ministry of EL- Awgaf. He is now receiving a very small pension (about E.L35 per month). The total estimated income of the family is about E.L420 per month.

It is important to note here that the increase of household income by having more earners in the family is usually accompanied by more financial responsibilities and additional expenditure. The responsibility of the elder sons who are starting work will be divided partially to assist in the whole family expenditure and partially towards planning for their own future as a head of household. In Helwan and El Tebeen in the case where the elder son was an earner he usually helped considerably in financing the extension. Fig 3.27 illustrates the estimated incomes of each household of the three sites.

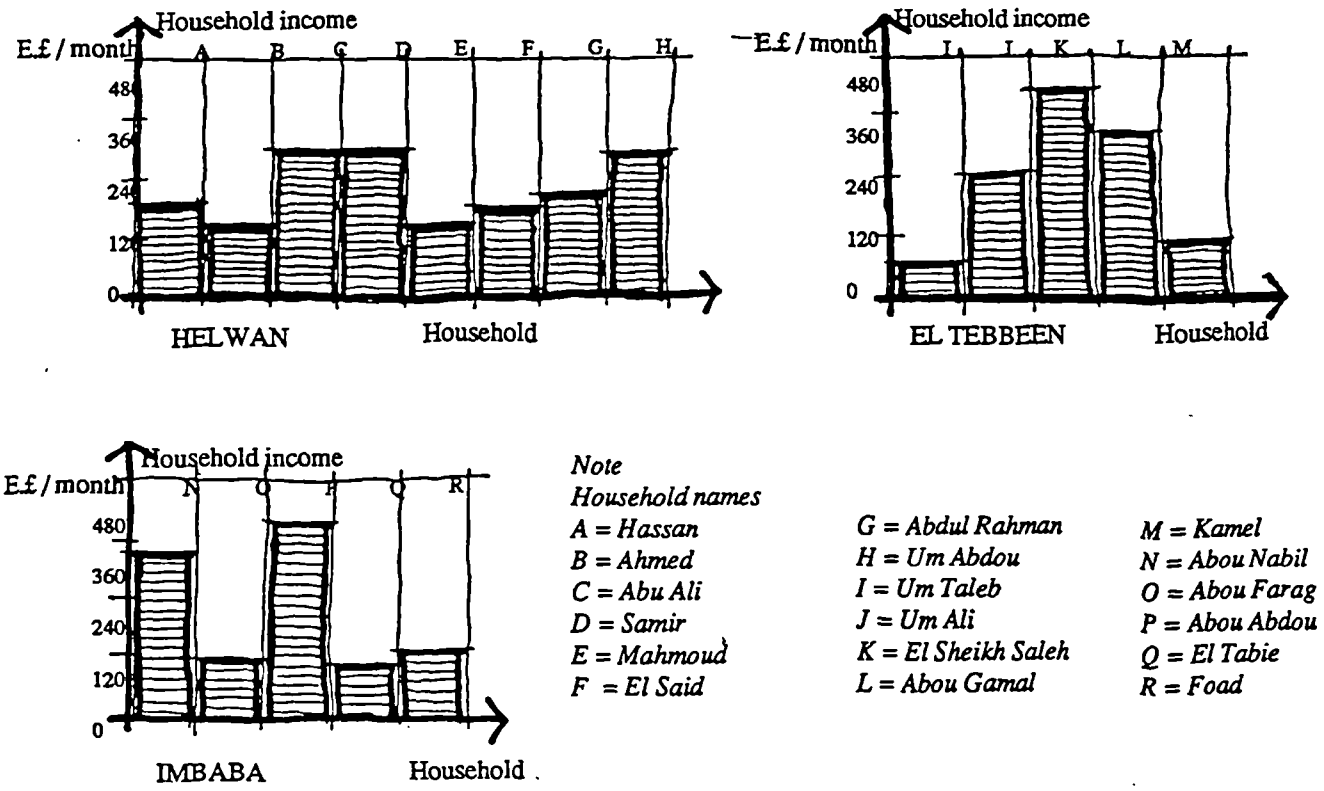



Fig 3.27 Estimated Household Income.

## 2. Type of Employment of Head of Household and his skills.

HELWAN.

All the residents of Helwan Economic Housing are either workers in one of the public factories or have been previously, and now they are on pension, so the stability of income is always guaranteed, except in special circumstances, for example, when the public worker dies and none of his family members is eligible for receiving his pension. This case is shown by the following example. In the " Samir " case, the flat was owned by Samir's father, who died seven years ago, his step-mother died shortly after him. Samir is the only son and his is over twenty-one and both of his sisters were married when the step-mother died. (One of the sisters is now divorced.) So the pension was stopped. Actually this case points out the fact that within some years the stability of income - which is dominating factor in the economic characteristics of Helwan Economic Housing households - will be shaken. However, with the tendency among the workers to encourage some of their sons to work in the public factories of Helwan, the factor of income stability might not be greatly affected.

Six out of eight heads of households in the Helwan Economic Housing case are skilled workers. Two of them, Abdul Rahman and El Said had reached the position of head of department in their factories before retiring. The two remaining households are Ahmed who is in the stores department of the El Nasr Factory for Pipes and Mahmoud is a driver in another factory.

EL TEBEEN

The type of employment in El Tebbeen Marrazik Housing is very similar to Helwan, where the majority are public workers, except some of the householders, who are not. That is due to the fact that some of the units were allocated by Cairo Governorate for non-public workers (about 15% of the total units). Those households were allocated one bedroom flats in single loaded corridor access block or in double loaded corridor access blocks.

Only one of those households was included in the sample. Am Taleb, her dead husband (35 years old when he died) was a self-employed unskilled labourer, who used to hire himself out for any available job, sometimes as a construction labourer. Um Taleb herself is now working as a mobile vegetable seller. She does not have any education or training, neither did her husband.

IMBABA.

In Imbaba Nasser Housing the type of employment and skills of households is very variable. In my sample there are a public worker, Farag in the nearby factory of Spinning and Weaving, Foad a governmental employee on pension, Abou Mohamed, a plumber in the Ministry of El Awgal, El Tabie, a waiter in a private popular restaurant and Abou Nabil, a self-employed skilled painted and blacksmith.

3. Auxiliary Resources.

Auxiliary resources here are meant to be any factor which might help towards fulfilling the extensions cost. The

auxiliary resources can be in a direct financial or materialistic form such as an income additional to the usual household income. As having a member of the family remitting money for a certain period, sale of land or wife's jewellry or receiving money from a charity organisation. It can also be in an indirect form. As the possibility of having a skill related to the construction activity which helps towards reducing the extension construction costs considerably, reducing the labour costs, or having a cheaper access to construction materials (Fig. 3.28).

| Direct | | | Indirect |
|---|---|---|---|
| Self finance | Credit free saving or borrowing | Borrowing with credit | Cost saving factors |
| remittance money<br>tangible assests<br>jewellry<br>property<br>durable goods<br>extra working hours<br>charity | savings clubs (Gamiya)<br>borrowing from relatives and friends | borrowing from the contractor. Usually half the costs of extensions | skills related to building activities (labour cost)<br>cheaper access to building materials or labour |

Fig 3.28 Auxilliary Resources.

Notes:
1. The most common items to sell when the need for money arises are the wife's gold bracelets, then the electric fridge.

2. The savings clubs (Gamiya) usually covers about 30-50% of the down payment paid to the contractor.

3. Skills related to building activities could save up to 50% of the costs of the second stage activities, (walls, partitions, plaster and carpentry work).

HELWAN.

Four families in Helwan had direct auxiliary resource of income. Hassan family, that was then the elder son was working in Iraq for three years. He was remitting an average of E.L 80-100 per month to help his family towards the education of his brothers and sister as well as to finance the additional room. He finally returned from Iraq in 1988. The same family had an indirect sort of auxiliary resources too. As the father did all the masonry work of the from room and the painting of the front and the back rooms. ( Fig. 3.9 ). The second case is El Said. He had two kinds of direct auxiliary resources. The first was when his wife had to sell her jewellry in 1981 to finance the first stage of the extension (one room). The second was when he received his end of service award in 1988 which he is now investing in the second stage of the extension which is an additional three rooms one of which will be a shop. (Fig.3.14)

The third case is the Abdul Rahman case , who also has received the end of service award and invested part of it in the extension.

The fourth case is Ahmed who had inherited a house in his village along with his sisters and brothers when their father died. They agreed to sell the house and each of them received their share. He is investing this money in extensions.

As an example of the indirect auxiliary resources, Ali, the eldest son of Abou Ali, has managed to build all the walls and later on to paint the new rooms with the help of his brothers.

In El Tebbeen, the sons of El Sheikh Saleh did all the finishing works by themselves, including the woodwork.

EL TEBEEN

In El Tebeen there is also a certain phenomenon in which is worth recording. It is the existence of charitable funds coming from a certain scheme organised by one of the National Newspapers, El Akbar. As it happens, one of the residents of El Tebbeen Marrazik workers city is working as a part-time Editor in this newspaper, in addition to his work in the Iron and Steel factory. He helps to gain financial support for some of the needy households of the settlement. Usually a part of this money, or all of it, is directed towards the extension costs. In my sample there are two households who have previously received some money from this newspaper. Um Taleb received E.L300 in 1986, she gave E.L200 to the contractor as a down payment towards the cost of the additional room. Um Ali, too, received E.L200 which she had to complete by selling her jewellry, to E.L 500, which she gave to the contractors as a down payment towards the cost of two rooms (concrete skeleton). (Fig. 3.18.)

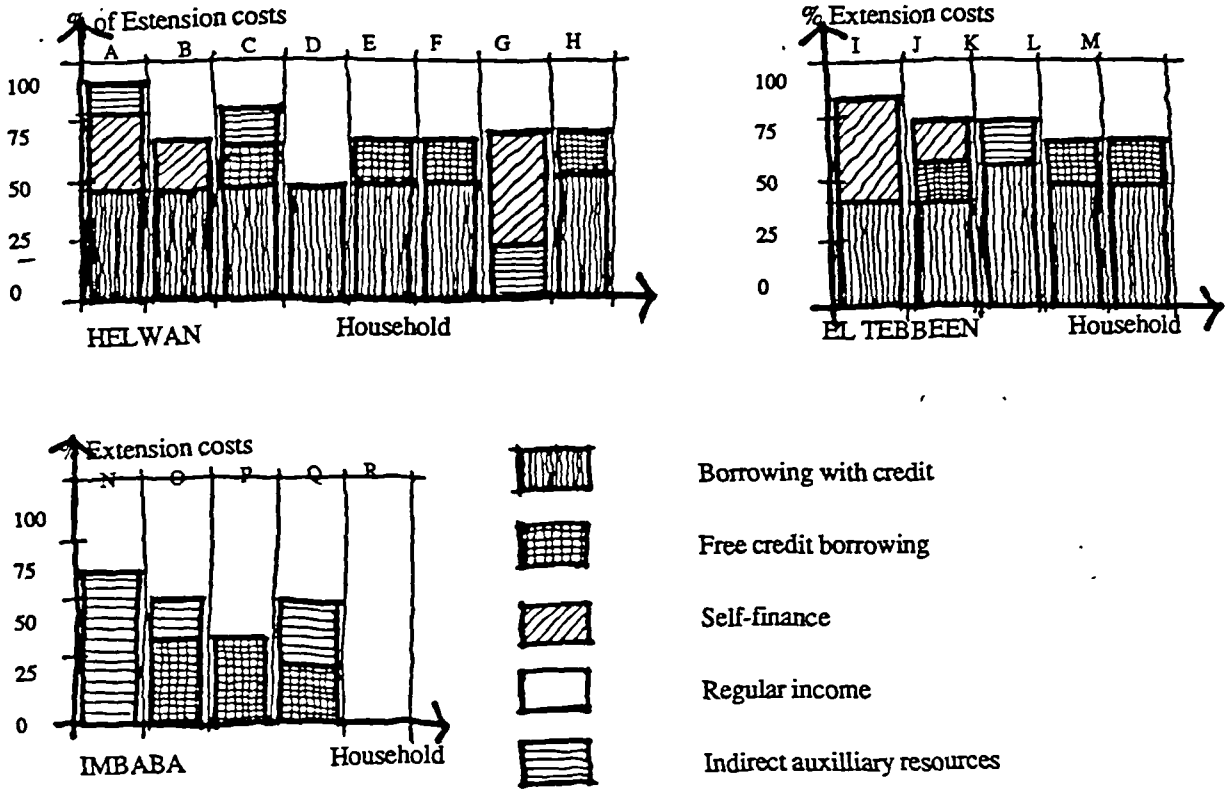
IMBABA

In Imbaba the auxiliary resources were confined to the indirect kind only, i.e. Abou Nabil saved a lot of money by constructing the additional room and corridor (projecting extension made entirely out of steel skeleton) (Fig. 3.22.)

He claims it is he who started this type of extension in the area, the rest of the neighbours are copying him. They often ask for his help and advice. Also in the

case of Abdou Farag he built the additional room entirely by himself (masonry bearing wall and wooden roof). (Fig. 3.23.)

In order to compare the significance of each auxiliary resource to the whole expense of the extension, in each case a graph is used (Fig. 3.29)




*Note*

*Household names*

*A = Hassan*
*B = Ahmed*
*C = Abu Ali*
*D = Samir*
*E = Mahmoud*
*F = El Said*
*G = Abdul Rahman*
*H = Um Abdou*
*I = Um Taleb*
*J = Um Ali*
*K = El Sheikh Saleh*
*L = Abou Gamal*
*M = Kamel*
*N = Abou Nabil*
*O = Abou Farag*
*P = Abou Abdou*
*Q = El Tabie*
*R = Foad*

Fig 3.29 The contribution of the auxiliary resources towards the extensions costs.

Another phenomenon which is widespread among the Egyptians as well as in my samples in the three projects is the saving club or the Gamiya. Gamiya is a sort of informal collective saving where a number of people (neighbours, relatives or friends) may join in and everyone pays a certain amount of money (usually E.L 20 per month in my sample) and every month one of the participants received the collected money (in the sample is was between E.L 200-600).

There is no interest rate involved in this process, but the actual reasons why this sort of saving is very popular among the Egyptians may lie in the flexibility which characterises this process. The flexibility in deciding the total amount of money that the Gamiya is worth (The Gamiya value), the amount of repayments and the period that the repayments will cover. Another very important factors behind the popularity of this form of saving is that the participants usually have easy access to one another, or at least they see each other on a regular basis, as in the case of relatives.

4. Number of Earners.

HELWAN

Five out of the eight households of Helwan have more than one earner. The second earner is usually the eldest son, who in most of the cases is a skilled worker with a technical middle education. Only in the Samir case the second earner is his brother-in-law, and in the Am Abdou case it is herself as she works in their stationary shop.

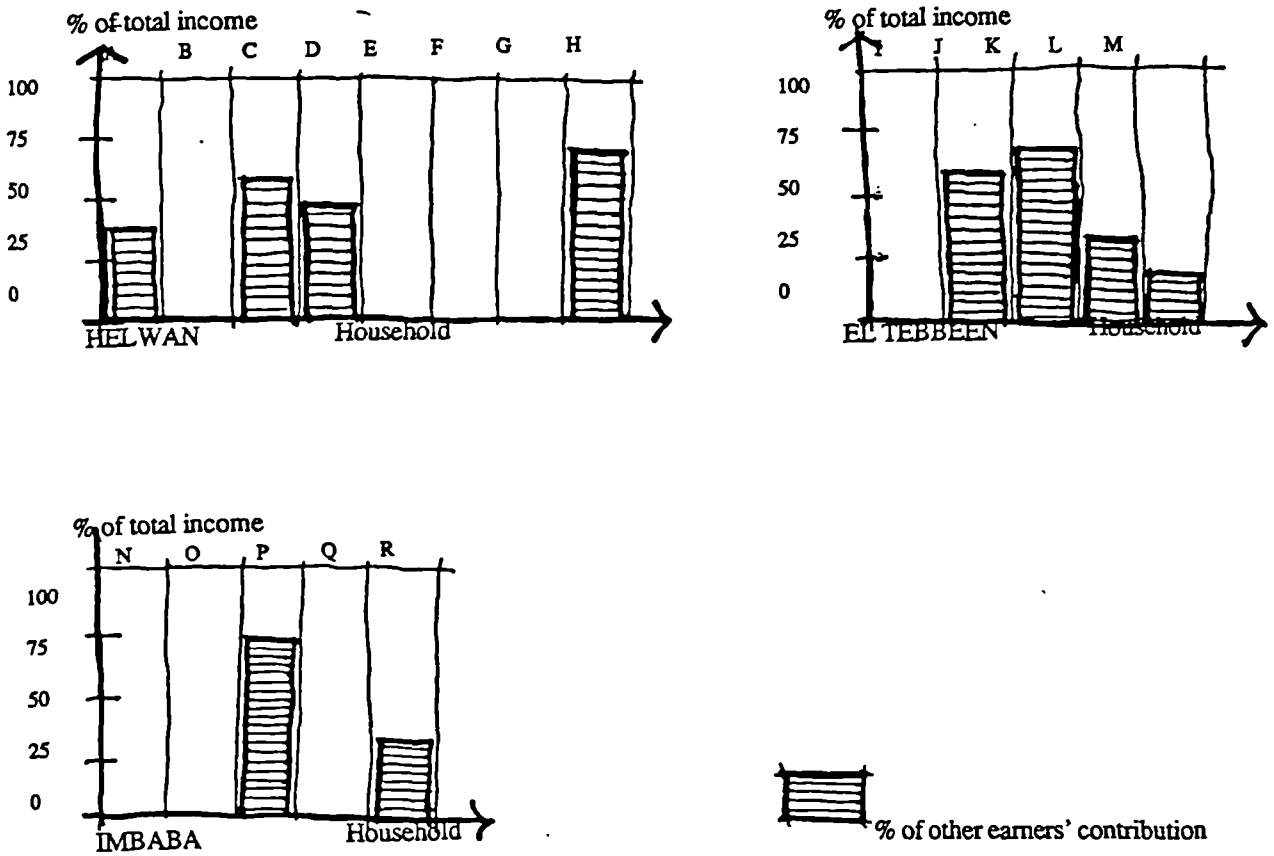
EL TEBEEN

In El Tebbeen four out of the five had a second earner. In the El Sheik Saleh it is all of the family (seven sons plus the father) working as furniture carpenters in addition to the fact that the second son is working as a agricultural engineer in the government. Also in the Um Ali case, she is a third earner, there is the father's pension and the husband's monthly repayment (they are separated), but as she explained she does not want to depend entirely on the husband's monthly repayments. He is a privately employed worker in El Madabegh, he works in one of the factories which prepare leather from cattle skins. She adds that her husband's work in not stable enough, besides that, she would not trust him and his new wife to keep paying all the time. Abou Gamal has two of his sons working, the first as a public worker like himself, the second is a skilled craftsman with a technical middle education. In the Kamel case, there is one of the sons working in a private factory which makes handbags. He is about 18 years old and he did not finish his education.

IMBABA

In Imbaba only two families have extra earners. One is the Abou Mohamed family, where the three older sons are working, two of them in private jobs (a waiter in a private restaurant and a private driver), the third is a teacher in a government school. In the case of Foad he himself is the second earner. He is receiving a pension from the Ministry of El Awagaf, where he used to work in auxiliary services. He

is now working in a private consultancy office as a helper. His two older sons are about to graduate from the university. Figure 3.30 shows the significance of the income of the additional earner compared to the total household income.




*Note*

*Household names*

*A = Hassan*
*B = Ahmed*
*C = Abu Ali*
*D = Samir*
*E = Mahmoud*
*F = El Said*
*G = Abdul Rahman*
*H = Um Abdou*
*I = Um Taleb*
*J = Um Ali*
*K = El Sheikh Saleh*
*L = Abou Gamal*
*M = Kamel*
*N = Abou Nabil*
*O = Abou Farag*
*P = Abou Abdou*
*Q = El Tabie*
*R = Foad*

Fig. 3.30 The Contribution of the other earners towards the total household income.

b. Socio-Cultural Characteristics.

1. Household size and formulation.

HELWAN

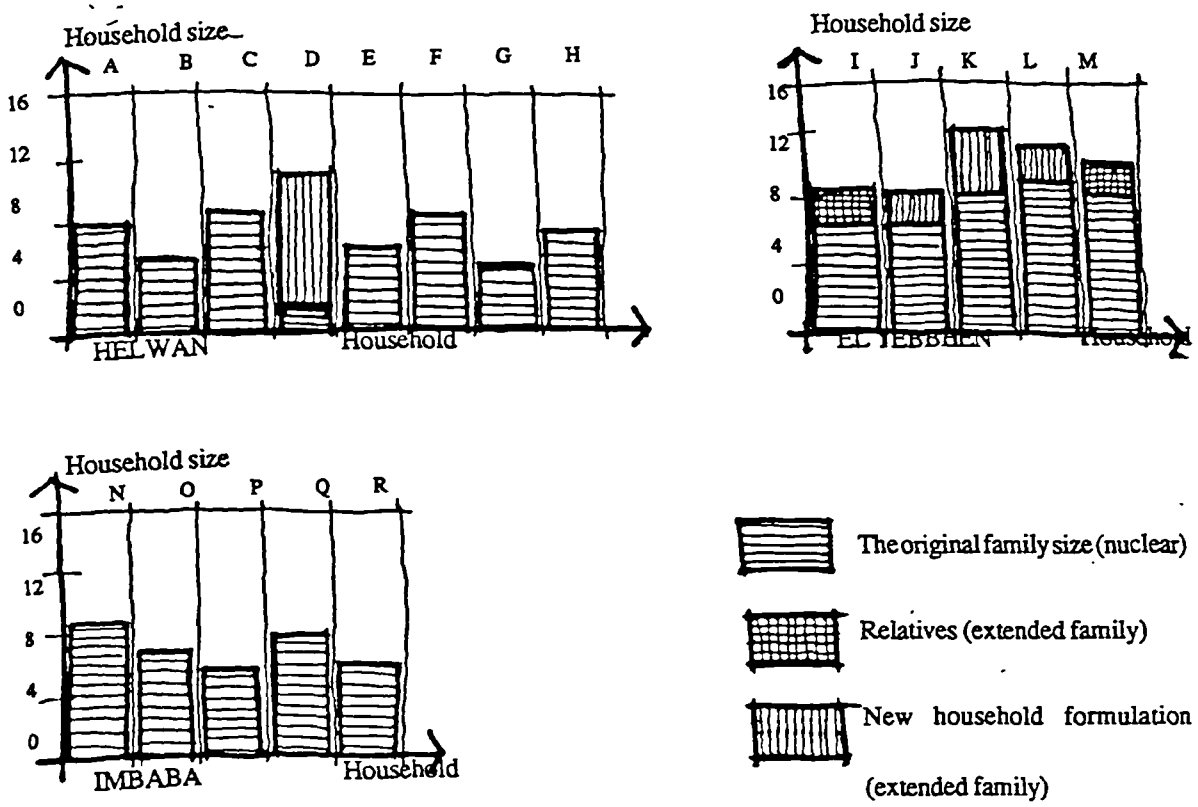
Among the eight households of Helwan there is only one family which could be considered as an extended family.This is the Samir family. Samir and his two sisters have inherited the flats along with their step mother after the death of his father. Their step mother lives with her sister now and she has agreed with them to receive a monthly rent in return for her share in the flats. Samir now lives in the initial two roomed flat with his divorced sister and her son. His married sister built a similar flat on top the the inital one as an extension on to the roof. So at the present time the whole construction houses three families with a total of eleven members. Samir is now intending to get married and live in the initial flat which is on the fourth floor. He hopes to be able to extend horizontally as the neighbours have done beneath him.

EL TEBEEN

In El Tebbeen the five cases are extended families. Three of them, because of the formation of new families within the same flat, as in the case of Abou Gamal, Um Ali and El Sheikh Saleh. The remaining two cases are, the Kamel case where his mother and his divorced sister had to come to live with him. The same is in the Um Taleb case where her divorced sister and her son had to come to live with her.

IMBABA

The five families of Imbaba case study were nuclear families. Figure 3.31 illustrates the household size and formulation for the three case studies.




*Note*

*Household names*

| | | | |
|---|---|---|---|
| *A = Hassan* | *F = El Said* | *K = El Sheikh Saleh* | *P = Abou Abdou* |
| *B = Ahmed* | *G = Abdul Rahman* | *L = Abou Gamal* | *Q = El Tabie* |
| *C = Abu Ali* | *H = Um Abdou* | *M = Kamel* | *R = Foad* |
| *D = Samir* | *I = Um Taleb* | *N = Abou Nabil* | |
| *E = Mahmoud* | *J = Um Ali* | *O = Abou Farag* | |

Fig 3.31 Household size and formulation.

However, it seems that the near future (two to five years) will witness a period of rapid transformation in the household formation concerning the Helwan sample, as five out of the seven representative families are intending to marry some of their children in the flat. In three cases among them, that will take place in less than two years.

## 2. Occupancy rates inside the units.

### HELWAN

In a case of Abou Ali in the Helwan sample, the eight members of the family were living in a two roomed flat with an area of 25 m2, which means that the number of persons sharing a room was four persons, which is quite a high rate of occupancy. The average rate for Cairo in 1986 was 1.5 per room.

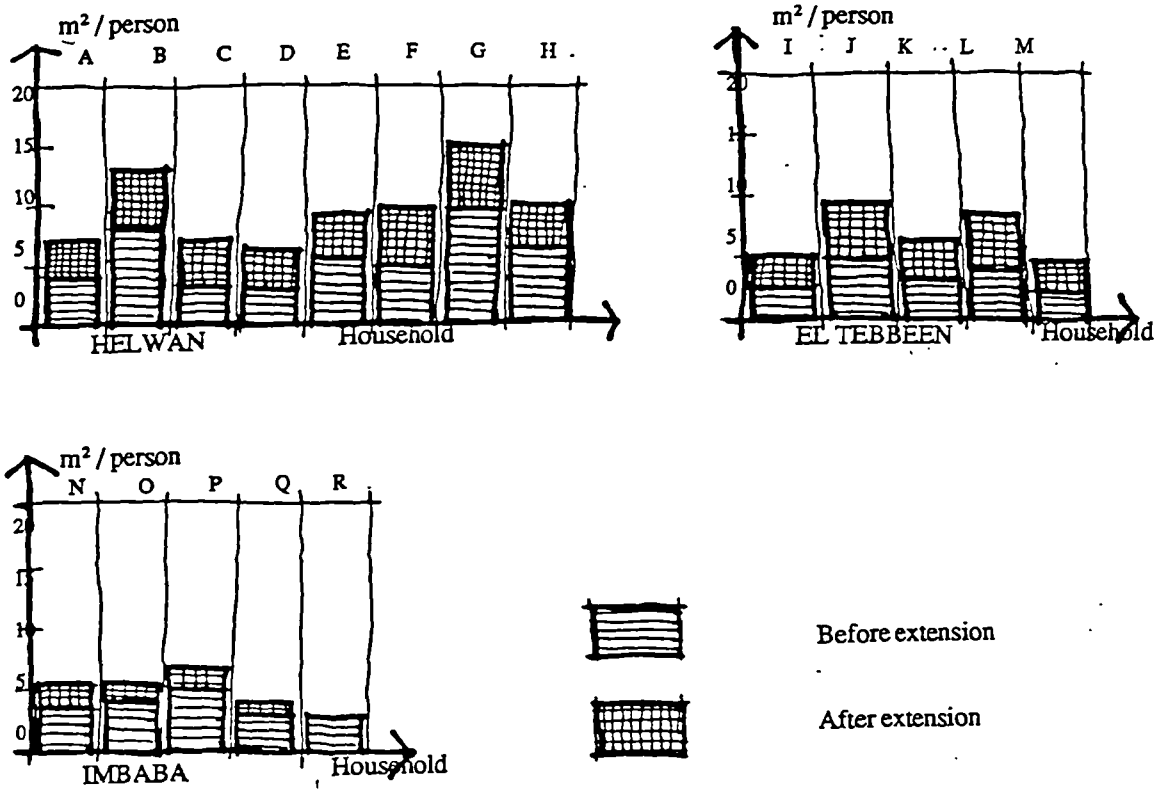
After the extensions were built the occupancy rate was reduced to two person per room. Meanwhile in the case of Abdul Rahman the occupancy rate before the extension was relatively low to start with at 1.7 persons per room, however this did not discourage him from extending his flat (on the fifth floor). After the extension, in this case the rate of occupancy dropped to one person per room and the share of area per person increased from 9.4m2 per person to 15.3m2 per person which is even more generous than the planned average area per person of 12.1 m2.

### EL TEBEEN

As can be seen from Fig 3.32 the pattern of improvement in occupancy rates of El Tebbeen and Helwan cases are very similar.

IMBABA

The situation was quite different in Imbaba as the extension areas are usually very limited compared to Helwan and El Tebeen. The improvements introduced to the occupancy rates inside the flats after the construction of the extension can be seen in Fig 3.32. Bearing in mind that the four extensions of abou Farag, Abou Nabil, Abou Abdou and El Tabbie are considered to be the largest extensions in Imbaba.




*Note*

*Household names*

*A = Hassan*
*B = Ahmed*
*C = Abu Ali*
*D = Samir*
*E = Mahmoud*
*F = El Said*
*G = Abdul Rahman*
*H = Um Abdou*
*I = Um Taleb*
*J = Um Ali*
*K = El Sheikh Saleh*
*L = Abou Gamal*
*M = Kamel*
*N = Abou Nabil*
*O = Abou Farag*
*P = Abou Abdou*
*Q = El Tabie*
*R = Foad*

Figure 3.32 The Improvement in Occupancy Rates

3. Children of Marriageable age.

HELWAN.

Most of the households interviewed in Helwan have sons or daughters of marriageable age. Only two out of the eight households in Helwan have no children who have yet reached marriageable age.

EL TEBEEN

In El Tebbeen two out of the five households have children of marriageable age.

IMBABA

In Imbaba only one household, which is Abou Abdou has three sons of marriageable age. Actually, having a son rather than a daughter is a very strong motive for extending the flat, as it is the groom's duty to provide the house. On the other hand having a girl of marriageable age puts financial pressure on the family, as it is the bride's family duty to provide the furniture. However, under the critical housing problem in Egypt, the families are often forced to negotiate their roles and exchange them if necessary.

4. Expenditure and Consumption Behaviour.

A range of 45% to 55% from the household income is usually devoted to food. Electricity and fuel costs are quite cheap due to subsidies. Annual expenditure include items like clothing, medical treatments and social obligations. The

cost of the extensions appears as an item of monthly expenditure, in the form of instalments to the contractor or to the materials supplier. Sometimes the extension costs depend on the household savings or auxiliary resources, in other times the annual expenditure can contribute towards these costs.

Expenditure on clothing items seems to be greater in some cases then the others. As in El Said case, his wife and daughters explained that because of the importance of public appearance, dressing well is a very important factor especially for the sons and daughters when they reach their adulthood. Concerning furniture, it is usually simple and functional, and consists of beds, in most cases one or two clothes chests. A very popular item is what is referred to as Instanbulli Sietie, for both the purpose of sitting as well as sleeping in sometimes. This very practical and relatively inexpensive furniture includes a storage space too.

Only three families out of the eight in Helwan, have what is referred to as a salon or a guest sitting room. In El Tebbeen three out of the five households have a salon while in Imbaba only one out of the five have a salon.

As for domestic appliances all of the households in the three case studies have a gas stove. Only Um Taleb out of the 18 households interviewed in the three cases did not have a fridge. Most of them have a half-automatic washing machine. Four out of the 18 households did not have a colour TV; Um Taleb, Foad, Abou Farag and Kamel. The acquisition of

a colour TV represents a status symbol. Because it is now considered in Egypt as a consumable item, purchasing it proves that the households has satisfied all his other essential needs.

Some examples of household expenditure were chosen from the three case studies.

Example 1.

Mohmoud.

Mahmoud represents a very wide spectrum of the population of Helwan worker city, which is the skilled worker with low middle income. The size of household in this case is six. The initial provision is a two bedroom flat with an area of 35 m2. The extension area is about 25 m2 and consists of two rooms. Mahmoud's total monthly income is about 150.00 E.L.

Expenditure.

| Monthly. | | Annual. | |
|---|---|---|---|
| Food | 60 | Clothing | 120 |
| Fuel | 4 | Schools | 50 |
| Electricity | 4 | Medical treatment | 40 |
| Extension Repayment | 20 | Others | 150 |
| Gamiya | 20 | | |
| Others | 25 | | |
| Total | 135 | Total | 360 |
| | | Monthly Average | 30 |

Total monthly average expenditure = L.E 165.00 per month.

Deficit = L.E 15 per month.

The issue of deficit in household income and how it is replaced is explained in chapter five while discussing the extensions process affordability.

Example 2

Um Ali.

Um Ali also represented a wide spectrum of El Tebbeen households as a stable middle income household. Um Ali lives in a two room flat, with an area of 35 m2. It was extended by an additional area of about 42 m2. The household size is nine.

Total income:

| | |
|---|---|
| Um Ali's salary | 70 |
| Her father's pension | 100 |
| Her ex-husband's contribution | 100 |
| Total income | L.E 270 |

Expenditure:

| Monthly. | | Annual. | |
|---|---|---|---|
| Food | 120 | Clothing | 150 |
| Fuel | 4 | Schools | 50 |
| Electricity | 6 | Medical | 60 |
| Extension repayment (to contractor) | 75 | Others | 100 |
| Extension repayment (to materials supplier) | 25 | | |
| Others | 25 | | |
| Total | 255 | | 370 |
| | | Monthly Average | 30 |

Total monthly average expenditure = L.E 285 per month

Deficit = L.E 15.00 per month.

Two examples were chosen from Imbaba, as it is difficult to find one example which can be considered representative of a reasonably wide spectrum of the population.

Example 3.

Abou Abdou.

Abou Abdou represents the high middle changeable income. The household size is seven. The initial area of the two room flat was 35 m2 and was extended by one room with an area of 12 m2.

Total income:

| | | |
|---|---|---|
| Abou Abdou pension | | 50 |
| Eldest son salary (teacher) | | 90 |
| Second son income (waiter) | | 120 |
| Third son income (driver) | | 140 |
| Total income | L.E | 400 |

Expenditure:

| Monthly. | | Annual. | |
|---|---|---|---|
| Food | 150 | Clothing | 450 |
| Fuel | 4 | Schools | 40 |
| Electricity | 6 | Medical | 60 |
| Other | 100 | Other | 150 |
| Total | 260 | Total | 700 |
| | | Monthly Average | 59 |

Total monthly average expenditure = E.L 319 per month

Saving = E.L 81 per month

Extension costs of E.L 750 paid.

Example 4.

Abou Farag.

Abou Farag was chosen to represent the low stable income in the Imbaba case study. The household size is six. The initial provision area was 27 m2 which was increased by an area of 8 m2.

Total income = E.L 110 per month.

Expenditure.

| Monthly. | | Annual. | |
|---|---|---|---|
| Food | 50 | Clothing | 20 |
| Fuel | 4 | Schools | 50 |
| Electricity | 3 | Medical | 50 |
| Others | 10 | Others | - |
| Total | 67 | Total | 190 |
| | | Monthly Average | 16 |

Total monthly average expenditure = E.L 83

Saving = E.L 27.00 per month.

Extension costs of L.E 200 paid.

The eldest son works during the summer vacation in a carpenter's workshop (3 months per year). He is paid about E.L 1.2 per day. Hence the son's contribution to the total income is about E.L 9.00 per month, as an average.

## 5. Future Expectations

### HELWAN

In the Helwan case, most of the household's future expectation were directed mainly either towards completing and finishing the extension (if it was not already completed) or towards starting a new one (in case the options of a new extension are still available). For example, Samir is looking forward to starting a new two room extension, because at the present time he shares the two room flat with his divorced sister and her son. He is planning to get married in the near future, the marriage has to be postponed until he constructs the extension. Because the initial flat is in the fourth floor he was not urged to join the rest of the neighbours when they extended their flats. Samir's brother-in-law was the one who has financed the extension on the roof which consists of a complete two bedroom flat independent from the initial one. Samir's future expectation seems quite realistic and possible to achieve in the near future, considering his financial resources. Ali, the eldest son of Abou Ali, who has been engaged for six months is looking seriously for a flat. He had previously applied for a piece of land through Helwan New Communities sites and services scheme, but without success, although as he says, he fulfils all the required conditions for obtaining a plot. However, he is applying now for a flat in the same project.

### EL TEBEEN

The future expectations were, more or less, similar to those of Helwan households. Um Taleb has a slightly different dream, which is obtaining a permit to build a kiosk

in front of her block for selling vegetables. She has been trying to get this permit but without success. It is a very modest and practical wish, but it underlies a reasonable potentiality of growth in income. Her next very important wish is to educate all the children. On the other hand, Sheikh Saleh family seemed to have succeeded in realising most of their dream, which was mainly education for all the children and building a house in their home village.

IMBABA

All the five households wishes in the Imbaba case were mainly revolving around being allowed to extend their flats in a proper fashion like the rest of Helwan. All of them seemed to know what was happening in Helwan. They also admire the households of Helwan Workers Housing, whom they consider united together and out of this unity comes their strength. Moving out of the place altogether was the wish of El Tabie. He wants to move into another public housing scheme - near by Imbaba, where he wishes to obtain a larger flat.

6. Relations among neighbours.

HELWAN.

Relations among neighbours in the same block resembles to a great extent that of neighbours living in the same "hara" ( alleyway ) in an Egyptian village. Women chatting in front of the doorway of their flats, while preparing food is a common scene. It is a society where secrets cannot be hidden, and life is widely shared with neighbours.

Trust and feelings of security are usually prevailing among neighbours. Exchange of help and favours is common too.

EL TEBEEN.

No significant difference exists between Helwan and El Tebbeen case studies concerning relations among neighbours. In both cases the desire to maintain good and lasting relations with neighbours is quite obvious. Hindering the construction of the extension by refusing to join in is usually considered unfriendly behaviour which results in losing good friendship.

IMBABA.

The situation is different in Imbaba. Mistrust is not uncommon between neighbours. Although the social habits of women chatting on the doorways is common, complaining about the extensions of neighbours who are not on good terms with the extension's owners can easily happen. Mistrust of people's motivation is always there. Trying to keep away from neighbours is seen by some of them as a wise precaution, such as the wife of Foad who says that building extensions together as Helwan Economic Housing households might be quite difficult in Imbaba Nasser Housing - even if the local authority allowed it - became as she says "people here cannot agree, they are not one hand and everyone just looks after their own affairs.

## 7. SELF IMAGE.

### HELWAN.

Generally speaking, all of the eight households in Helwan consider Helwan Economic Housing as a suitable and rather respected place to live in, and up bring children. Especially if compared to places like Arab Rashed or Arab Ghumein (1). They usually criticise those settlements because of the very narrow streets that one can see and hear whatever is happening in the opposite house. Abdul Rahman says that Helwan Economic Housing offers a good social environment, as he says people here are educated not in the sense of being able to read and write, but in the sense of being able to understand what is going on around them.

### EL TEBEEN

The feeling that El Tebbeen Marrazik housing offers a good social environment for its users was evident from discussion with the five households. However the idea of being fully satisfied with their living condition was not as evident as in Helwan Economic Housing. Residents complaints about the inadequate public services was common. But views were expressed that the place could be a better place to live if thepublic services were improved.

### IMBABA.

Dissatisfaction was the main theme concerning their housing, the social environment and the level of services.

---

1. Two informal settlements located close to Helwan Housing.

Looking at themselves as an unlucky section of the population was a shared feeling between Abou Abdou family, especially his son (the teacher), Foad and his wife, the wife of El Tabie and Abou Farag.

8. The Role of Women.

HELWAN.

None of the eight wives in Helwan were working except Um Abdou who is a widow and how working in her own shop which is a part of the extension. Only one wife in the sample has primary education; that is Abdul Rahman and his wife can read and write. However, women play an important role in the realisation of the process of extension through economising and joining saving clubs with their friends or relatives. Sacrificing some of their belongings, such as golden bracelets, in order to contribute to extension expenses is quite common too.

EL TEBEEN.

In El Tebbeen, the same role is played also by women for raising extensions costs. Um Taleb, however, in this case, was forced to play a very difficult role by supporting a family of nine persons after the death of her husband, and without receiving any pension as he was a self-employed unskilled worker. Of course, the same situation would not be created by the death of any public worker. However, Um Ali has chosen to start working after the separation from her husband. Although he pays monthly alimony and although her father receives a pension (which will be stopped after his death). She considers her work as a necessity and an essential security measure.

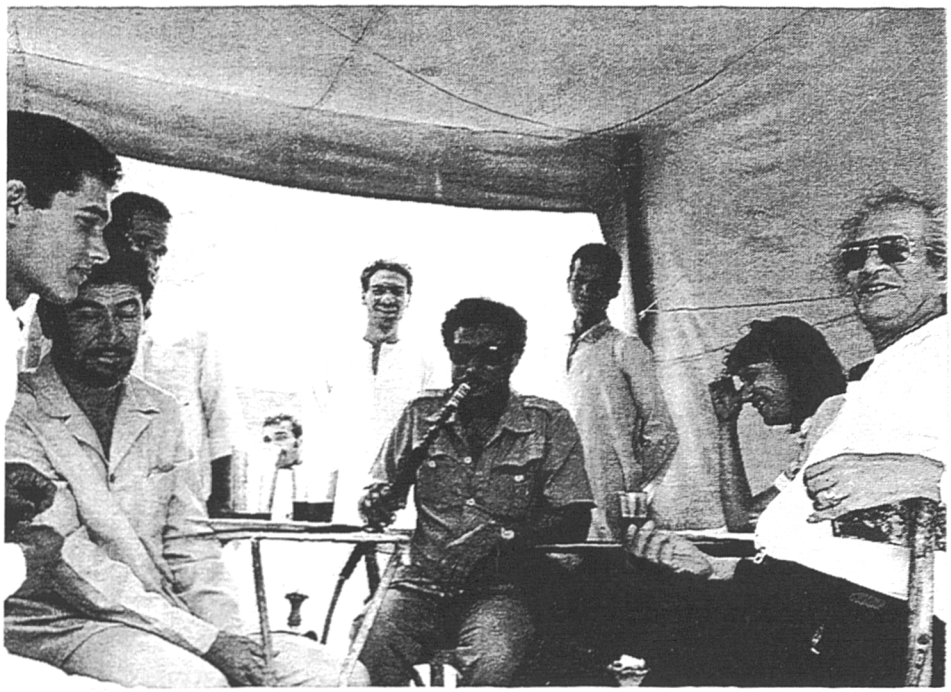
IMBABA.

All of the five wives in Imbaba are housewives. Nevertheless, the fact that they play a considerable role in forming the family opinion and decisions cannot be underestimated. As Foad's wife has put it, ".....you don't need to be educated or to graduate as an architect to know that the width of this corridor (the access gallery) is too small and it does not require much study to know that we badly need an additional room, I can tell you that without study.....". "..... certainly if there is a possibility for us to construct an additional room together with the neighbours like the people of Helwan, I would do whatever I can to save money for it, even if I have to cut down on food expenditure."

### 3.5.2 The Contractor.

Bassioni is one of the contractors involved in the construction of the extensions in Helwan and El Tebbeen. Based upon the information which has been gathered by interviewing him, his characteristics as a contractor are to a great extent similar to those of the contractors working in the informal sector. Bassioni is also involved in the construction activities in the nearby informal settlements of Helwan and El Tebbeen.

Bassioni was introduced to me, or rather I was introduced to him by a friend of his, who I had luckily met before. That is why Bassioni was willing to talk freely and



Picture 3.17 The Interview with contractor Bassiouni and his labourers.

with relatively minimal reservation, considering the illegality of his activities. Bassioni was the contractor who had built the extension for Um Ali in the El Tebbeen case stucy which made it possible to follow up the extent of accuracy in his answers.

a. Contractor's size of operation and activities.

Bassioni started his career as a contractor about 20 years ago. Before that he was a reinforcement blacksmith. The average scale of contracts he usually gets is a 4-5 storey block of flats (Emarah), which would be constructed on an average area of land of 150 - 200 m2. His work would

include the execution of the foundation, the concrete skeleton and the brick walls. Sometimes he would execute the sanitary connections too. He started to work on the extensions of the public housing flats in Helwan in 1979.

Later on he started to do the same in El Tebbeen workershousing too. His permanent staff consists of a carpenter, a blacksmith and three helpers. The rest of the labour he needs he hires on a daily basis. Bassioni has a registered number as a private contractor although a great deal of his work is in the informal sector housing. Bassioni's capital now would be around E.L 20,000.

As an example, a case study of one of the informal contractors was included in this study. Among the information included was the following; his permanent staff consists of five personnel , 2 carpenters and 3 helpers. The usual time he takes to construct a 150 m2 concrete roof is about 20 days. His net profit is about 10% and it can be increased to about 12% if he was supplying the construction materials. He claimed that he only requires 5% interest as a make up of the credit he gives. He said that he started in 1970 with a capital of E.L 350 and now his capital is about E.L 15,000. The average size of job he would get is about E.L 3,000.

**b. Methods of operating.**

1). Getting the job.

Usually Bassioni is introduced to the client by a mutual friend or acquaintance of both of them. He has a lot of friends in the area who have known him since he was a

child. Having a shared friend with a client, or clients, helps to establish the confidence among them rapidly. However, he adds that lately clients often approach him without any mutual relation. He has built a good reputation in the extension operations he has constructed before, and the people trust his abilities in this field.

The clients or the group of neighbours sharing in the extensions come to him after they agreed amongst themselves on the project. He does not have to interfere in convincing any of them to join. They even sometimes agree on one of them to be their representatives to Bassioni. However, he adds that that was not the case at the beginning of the 1980s when the process of extension was just starting.

People needed some encouragement and assurance. He had to play this role sometimes. He even had from time to time to knock on the doors of flats to talk to the neighbours and try to persuade them to join. But that is not needed any more. He said that it seemed to him that the households in the gallery type flats were the households with the worst conditions concerning the crowding levels inside their flats. But they are the poorest too, and reaching a convenient decision to all of them usually needed hisis counselling.

2. Costs of extensions and his profits.

The cost for only the concrete skeleton of two rooms is about E.L 1300 for each household. If the client agrees to pay in cash the cost can be reduced to E.L1 100 (according to the beginning of 1989 prices). The client is required to pay at least half of the total coast as a down

payment. The rest of the money would be paid in monthly instalments. Normally, they are required to sign a number of bills of debt to cover the instalments. If the cost of the job is relatively higher, i.e. E.L3000 to E.L 4000 he could be convinced to accept only a third of the total cost as a down payment. But in this case the monthly instalment would be as high as E.L 50.

The cheapest extension job he was commissioned to do recently was a two roomed extension which he costed only E.L 1100 for the concrete skeleton and the masonry walls. The most expensive one was a one room extension which cost E.L 1600 for only the concrete skeleton. The average time that an extension job would take to be completed is slightly more than one month for a two roomed extension for the five storeys.

It takes about nine days for each floor. On the first day a carpenter and a helper would erect the wooden scaffolding. The next day a blacksmith and a helper would prepare the required reinforcement and lay it down inside the scaffolding. The third day the concrete labourers arrive (from 4 to 5 labourers) to place the reinforcemnt,mix and pour the concrete. The concrete requires at least six days to cure.The labourers price is as follows:

| | E.L per day |
|---|---|
| bricklayer | 15 |
| reinforcement blacksmith | 20 |
| blacksmith helper | 78 |
| carpenter | 20 |
| concrete labourer | 10 |

The materials prices vary substantially from the declared formal prices. Bassioni purchases his materials from the black market. The prices in this market are exposed to a very rapid inflation rate, e.g. steel price until 1988 was E.L 480 per ton.; towards the end of 1989 it reached E.L 1050 per ton. Officially, the price of a ton of concrete is still E.L 170; in the black market it is E.L 300 per ton. Bassioni usually gets about 10% of the total cost of the contract as net profit. However, it varies slightly form one job to another as sometimes he accepts less than that for the sake of friendship or other social reasons.

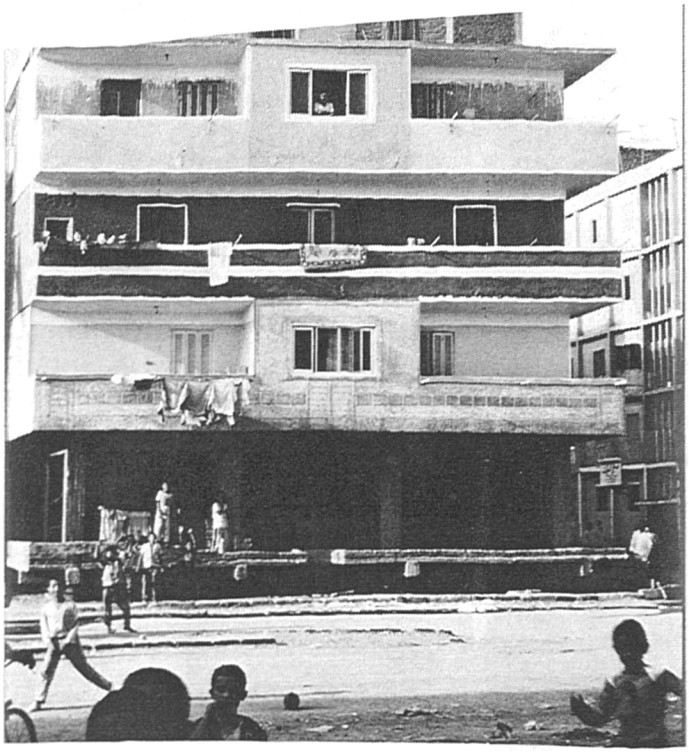
3. The Sub-contracting process.

Bassioni said that the extension process has actually helped a lot of the young contractors to start their career as contractors. Many of the blacksmiths and carpenters operating in this area started their careers as contractors in the extensions process. Bassioni added that he himself has often helped some of them to start. He would buy him E.L 500 worth of timber (for the wooden scaffolding), which is enough to erect scaffolding for 5 m2 of concrete, which is very suitable for this size of job. If this person is serious enough he would be able to pay Bassioni back his money and start off as a private contractor. However, it seems that some of them would fail because of the lack of experience or seriousness. In this case they would have to sell the timber in order to give Bassioni his money back. Obviously this method of operating helps Bassioni to avoid the legal responsibility too.

4. Problems and Difficulties.

The most serious problem that Bassioni might encounter in the extension process, although not occurring frequently, is the legal problem with the local authority. To avoid that, the quicker the concrete skeleton is completed the better. It is better to work at the weekends and to let the concrete dry during the week days in order to minimise the encounters between his labourers and local authority employers. However, he has learned to keep some labourers standing by so in case of the arrest of the labourers who are working, he would be able to replace them immediately before any further action it taken by the local authority. Bassioni claims that until now he had four legal cases against him, in which he was sentenced to six months imprisonment and E.L 10,000 worth of fines. His main offence in those cases was building on public owned land.

The other significant problems that he might encounter is the position of the services to the block. If such networks happened to obstruct the construction of the extensions he has to either disconnect the parts of the network causing the obstruction, which is a relatively expensive process or to build a concrete slab for the ground floor (Tablia) which is less expensive if it was possible (see Picture 3.18). In some cases he had to remove the electrical light posts which, anyway, were useless, according to his opinion.



Picture 3.18 Showing raised concrete ground floor slab.

c. Contractor's personal views.

In Bassioni's words, expressing his personal views towards the extension process; " According to Islam, parents must give separate bedrooms to sisters and brothers when they reach adulthood. Some of the families consist of 10 or 12 persons. Girls and boys are forced to share a room even with parents and sometimes with other relatives. So when they build those extra rooms they are obeying the teachings of their religion, so they must be encouraged and that is why I am helping them. "

### 3.5.3 The Attitude of the Local Authority.

In the first instance it is worth a brief description of the hierachy of the Local Authorities and their responsibilities. Egypt has a long history of being a

highly centralised country, in terms of government. Since the unification of the Northern and Southern parts of Egypt during the Mina rule,(2780 BC), the political government,located in the capital, has had the complete manipulation over the determination of policies. This state of affairs might be partially due to the topographical nature of the country; the Nile had always been the only source of life of the Egyptians. Through this fact only a strongly centralised government could administer the Nile irrigation system wisely and fairly. The other factor which seemed to have contributed considerably to this situation is the fact that Egypt was ruled for a very long period by different successive foreign colonial powers, which has always perceived the centralised government model as a very convenient system to maintain the stability of rule.

The first attempt to decentralise the government was made by Mohamed Ali in 1829 when he divided Egypt into several administrative sub-divisions. A step which coincided with the same reorganisation implemented throughout the Ohman Empire. The first Organic Law in 1893 established the provincial councils. Nevertheless, they were used by the British Administration not as a policy formulating body but merely as agents of execution. (Abu Lughod, J., 1979, pp.146,147.)

In 1960 the 142 Law established the Ministry of Local Administration, initiating the system of local government. This step was taken as it was sought to promote local participation through centralised planning and

decentralised implementation (Serageldin,M., 1983, pp.121,122). The successive laws in 1971 and 1975 consolidated the existence of the local government. This system created a twin hierarchy of executive committees and popular councils to provide a more flexible administrative system to the municipalities and to allow for the citizen participation. The system was modified in 1979 in order to give greater authority and administrative control to the governors.

### a. Hierarchy of Local Authority and its responsibilities

The governors are considered the representatives of the President of the Republic. They have control over the executive authority of the ministers, with respect to public service functions concerning the administrative responsibilities which were transferred from the central to the local level (Serageldin, 1983, op. cit.). They have control over housing, public utilities, urban planning, design of projects and upgrading.

The executive committees made up of the head of the locality, officials from various departments in the local administration and ex-officio members of the local councils. Those committees are basically responsible for the execution of the national policies and the administration of government services and projects within the locality.

The popular councils, made up from the popularly elected citizens from the various sub-areas of the locality, have the authority of supervision over some government

activities like housing, transportation services, annual budget allocations and policies towards locality/s property. Figure 3.32 shows the hierarchy of the local government. The municipal committee for local government sets general policies according to the national development plans. (Koch, J., 1978, p.83).

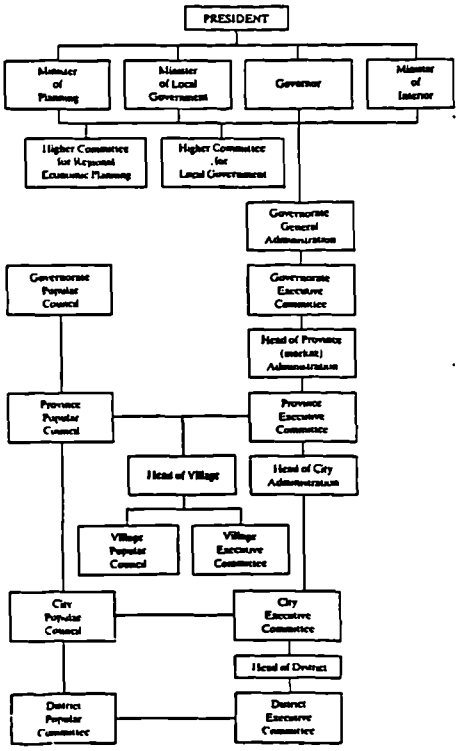



Fig 3.32 The local government of Egypt.

Source: Serageldin, M., Planning and Institutional Mechanisms in the Expanding Metropolis Coping with the Urban Growth of Cairo, Aga Khan Award, 1984, p.121.

Meanwhile the boundaries between the responsibilities of the central ministries, on one hand, and the corresponding authorities in the local government on the other hand, remain vague. In addition the local government cannot raise the necessary funds since they financially depend on the central government.

The Local council consist of different units or

departments on the same administrative level, e.g. departments of education, health, finance, social affairs, labour, housing etc. The housing department in turn is sub-divided into separate administrations, planning and building, circulation (roads, bridges and licences), drainage, electrical and mechanical equipment, public gardens and finally an authority to deal with the public housing.

The housing department is the responsible local authority, from which representatives have been interviewed in order to establish the local authority attitude towards the extensions phenomenon in each of the three case studies (1).

**b. Local Authority Attitude towards Transformations in the three sites.**

Two local authority representatives have been interviewed. The first if General Secretary of the North of Giza Local Council, the local authority which Imbaba Nasser housing lies under its control. The second is the General Director of the housing department on Helwan Local Council, the local authority which both of Helwan Economic Housing for public workers and El Tebbeen Marrazik housing for public workers come under its control.

1. North of Giza Local Council Attitude (Imbaba Site).

The attitude of the North of Giza Local Council towards the extensions process is basically towards

---

1. Only two local authorities were needed because Helwan and El Tebbeen are both under the same local authority.

prevention and demolition. A demolition order is usually issued for those extensions, accompanied by a recommendation for the head of public utilities police of North of Giza to demolish the identified extensions, in addition to another recommendation for the technical departments of the housing administration to carry out the order. However, it seems that the period passing between the issuing of the order and the execution can be quite long (e.g. according to Order No. 29 which was issued on 18 February 1989 the extensions attached to a certain block had to be demolished among other specified extensions; Visiting the site eight months later, the extensions were still there).

Nevertheless, that does not imply that those extensions are necessarily going to escape the demolition order in future. A very significant incident which occurred as a result of the user's inclination towards re-planning their environment, was the issuing of what is called the "temporary permission for a garden", which was issued by the housing administration in the North of Giza Local Council directed to the users of public housing units which exist within the boundaries of this Council. According to this permission, establishing a garden in front, or at the back of, the block (attached to the ground floor flats) is allowed. Some regulations were set, such as the garden depth should not exceed 3m from the external wall of the flat, the fence height should not exceed 1.5m and it should be made out of steel bars so that it would not prevent seeing through, then the permission ends with stating that the local authority still holds the full right to cancel this

permission at any moments and demolish the gardens whenever it likes, as this permission does not act as a legal document (Picture 3.19).

Picture 3.19 Gardens built up according to the North of Giza Local Council's permission.

Actually, this incident has both a positive and negative side attached to it. Firstly, the positive side is the realisation of the local authority that the transformation of the site which is introduced by the users can improve the environment in a desirable way and that is not necessarily an anti-disciplinary attitude. In other words, it is the recognition that the built environment provided by the government is not the perfect finished produce which should not be allowed to be spoilt by the user's transformations.

However, the victory achieved by the issuing is this permission is fairly incomplete, because of the negative sides embedded in its formation, which is the temporary adjective used to describe its effectiveness and which underlines its uselessness as a legal document, and the incomprehensive design decision of limiting the maximum garden depth within 3m without giving any consideration to the different potentialities of the different sites in the project and without any attempt to provide a comprehensive re-design for the open spaces. However, the most significant negative aspect, in my opinion, is the reasoning which was given at the top of the permission to explain the aim of its issuing. Simply there is no mention of all of the users need for the unused spaces. Instead, what was stated is "according to the government policy for encouraging the plantation of trees which is considered as an aesthetical feature, the local council feels reluctant to kill those trees planted by the users....."

Discussing the extension subject with the General Secretary of the local council resulted in identifying some positive and other negative results of this phenomenon, according to his point of view.

Firstly, the negative aspect of the extensions is the increase of stress over the already over-exhausted utilities (water, sewerage and electricity). He estimates the increase of stress with at least about 10%.

Secondly, the positive aspect, utilising the user's own initiatives and cooperatives potentialities to

solve their housing problems, especially the social problems caused by the over-crowding inside the flat, which in his opinion is getting more and more critical.

Finally, he added that it would be a practical sound policy for local authorities to accept the extension phenomenon as an ipso facto and instead of fighting it and demolishing the extended room - which cost both the government and the user - they should start to rent the land occupied by the extensions to the users. Concerning the rent fees he suggested that the initial rent of the flat which ranges from E.L 1.50 to E.L 3 per month is unreasonably low and its should be increased to E.L 10-13 per month.

As for the extension land he proposed the figure of E.L 4-5 per month. Finally, the explained that due to lack of staff (technical personnel) it would not be possible for the local council to act as a development agency in the case of legalising the extensions process.

2. Helwan Local Council Attitude

The attitude of the local authority of Helwan towards the extension phenomenon in both of the case studies which lies under its authority (Helwan Economic Housing and El Tebbeen Marrazik Housing) was practically different from the North of Giza attitude towards Imbaba Nasser Housing extensions. In Helwan there is an informally declared decision from the local authority not to interfere, similarly to ignore the process (except in case of complaints made by neighbours or causing structural damage to the building).

It seems that this decision was taken about eight years ago. Since then the rate of the extensions that have been constructed has accelerated substantially. This decision was a result of some political circumstances and of the influence of the locally elected representative of Helwan to the "People's Assembly".

However, the personal point of view of the general director of the housing department was quite similar to what has been previously stated by the representative of the North of Giza local authority. The main disagreement between the two points of view is that the Helwan representative considered the main negative aspects of the extension as the lack of homogeneity and order in their form, and that there are some structural risks involved. Finally, the explained that the local council cannot act as a development agency in cases of the legalisation of the process, firstly, because it is under-staffed and secondly for political and social reasons.

## 3.6 SUMMARY.

This chapter has described the characteristics of the informatives who were involved in the transformation process and their roles.

The extensions built by the users with respect to the initial provision have been acknowledged. Three projects have been investigated and interviews have been conducted. The three projects were Helwan, El Tebeen and Imbaba, these

three projects presented a wide variety of circumstances - a variety which is diverse enough to give an overall picture about user's roles and opinions. The 18 households who were interviewed were not intended by any means to represent the general characteristics of the whole population but are examples of households who live in the three housing projects and who have enough experience to describe the transformation process. They also have been instrumental in giving information concerning their position in the process in relation to other actors e.g the contractors and the Local Authority who are equally involved in the same process.

Bassiouni, the contractor, was specifically a very valuable source of information. First of all because he was introduced to the researcher by a mutual aquantaince. A situation which has helped to establish some level of trust and credibility. Secondly, because he has been deeply involved in the building of extensions since the outset of the extension activity. Thirdly because one of the households interviewed had their extensions built by Bassiouni and this allowed Bassiouni's statements to be double checked.

So far as the Local Authority's views were concerned, the interviews established the Authority's attitudes towards the extension process. It became quite clear that the Local Authorities of Helwan and El Tebeen decided to ignore the extension activites since the early 80's. Meanwhile the Local Authority responsible for Imbaba is still active in trying to prevent the construction of extensions.

In Helwan and El Tebeen, where Bassiouni was mainly in operation, the extensions generally speaking consist of three to five floors of construction work extending flats sometimes to about of 50% of their orginial gross floor area. Not all of this extension activity could be considered as physically safe, as in the Imbaba case, where cage-like extensions, without ground floor support, represent a indismissable source of danger. However, on the whole, these two projects have political sympathy with the authorities and do not suffer the insecurity of any impending demolition action.

This chapter has attempted to record and chart extension activity as it actually occurs and is practised.

It cannot be denied that informal structures of operation have become established as a local market operation which serves a population, understands its requirements and meets those requirements with a direct level of affordable solutions and more importantly solutions which accord with social and cultural objectives.

---

References.

Abt Associates Inc., Dames & Moor and GOHBPR (1982) **Informal Housing in Egypt**, USA Agency for International Developemnt.

Ahmed,M (1990) **Housing Flexibility, Synthesis and Application with Reference to the Egyptian Experience in Cairo.** PhD thesis, University of Helwan,Zamalek, Cairo.

Aref,H (1989) **The Latent Potentialities of Low Income Residents in Housing Projects**, Masters thesis, Cairo University.

Benjamin,S. (1985) **India- Formal versus Informal** The Architectural Review No.1062.

Bouchair,J (1984) The Problem of Adaptability in Mass Housing in Algeria. MPhil thesis, University of Newcastle on Tyne.

Dasgupta,A (1990) Negotiating for Growth and Change - a study of user initiated transformation of Formal Housing. Open House International Vol 15.No 3.

Fathy,A (1987) A report on the Living Conditions in a Public Workers City. El Talia Journal No 2. Cairo.

Habraken N.J (1970) Three R's for Housing. Scheltma and Holkema, Amsterdam.

Habraken N.J (1983) Transformation of the Site. Awater Press, Cambridge, Massachusets,USA.

Patton,M (1990) Qualitative Evaluation and Research Methods, SAGE publications, London.

Peattie,L (1983) Realistic Planning and Qualitative Research. Habitat International Vol 7 No 5/6.

Sakr,S (1983) In use Modification of Existing Public Housing in Cairo. Egypt, Masters Thesis,MIT, Cambridge, USA.

Sinha,A (1991) Participant Observation, A Study of Sate Aided Self Help Housing in Lucknow,India. in Tipple,G and Willis K (eds) Housing the Poor in the Developing World.Routledge.

Steinberg,F (1984) Ain El Sira in Cairo:The Architecture of Poverty, iin Open House International Vol 9 No 2.

Steinberg,F (1987) Cairo Informal Housing and Urbanisation:Positive Contribution and Challenge for the Future. Paper for the Seminar on Official and Formal Supply for Low income Housing in the Third World. IHS Amsterdam.

Tipple,G,Wilkinson,N and Nour,M (1985)The Transformation of Workers City of Helwan. Open House International Vol 10. No 3.

Tipple,G and CARDO staff (1991), Self Help Transformations of Low Cost Housing; an Introductory Study. CARDO, The International Urban Press, Newcastle upon Tyne.UK.

Wikan,U (1980) Life Among the Urban Poor in Cairo, Livistock Publications,USA.

Wikan U, (1990) Changing Housing Strategies and Patterns among Cairo Poor; in Amis,P and Lloyd,P (eds) Housing Africa's Urban Poor, Manchester University Press, Manchester. UK.

Yin,R (1989) Case Study Research: Design and Methods. SAGE publications,London.

# CHAPTER 4

## The Factors Which Control the Extension Process

---

4. The Controlling Factors.

4.1 The User's Decision Making Process
- 4.1.1 Risk calculation factor.
  - a) Estimations of the weight of users' power against local authority power.
  - b) Estimation of costs against benefits.
- 4.1.2 Communication among the households.
- 4.1.3 Leadership among the group
- 4.1.4 Social pressure factor.
  - a) Direct social pressure
  - b) Indirect social pressure.

4.2 The Financial Mechanism.

- 4.2.1 Users' affordability.
- 4.2.2 The flow of funds.
- 4.2.3 The extensions' finance

4.3 The Initial Provision Design and Structural Constraints.

- 4.3.1 Residential Unit Size and the available space for extensions.
- 4.3.2 Housing unit locations in block and its effect on extensions.
- 4.3.3. Street block relation and its impact and effect on extensions.
- 4.3.4 Structural constraints.
- 4.3.5 Extensions' impact on the climatic performance of dwellings.
- 4.3.6 Extensions' accessibility and cultural considerations.

4.4 Conclusions.

## 4. The Controlling Factors.

There are three factors which have a considerable influence on the organisation of the extension process and hence the form and the quality of the resulting Environment. The first two factors are:

1. The decision making process and
2. The financial mechanism.

These two factors describe how and why the process of extension is actually accomplished. Both of them have radical influence on whether the extensions will be built or not, the form of these extensions and their quality. The third factor - which is the initial provision, has an unmistakable impact on the physical feasibility of the extensions' construction as well as on the quality of the physical environment. Although it seems at the beginning that these three factors could be classified respectively as social, economic and physical factors, that is not the case. Barriers between social, economic and physical factors are often crossed, the inter-relationships between them is quite complex, which makes it very difficult to assess where the influence of each of them starts and where it ends. However, when they are put together, they explain the general framework through which users' extension process is carried out.

### 4.1 The user decision making process.

The basic social unit of community which is involved in a communal form of extensions, as in Helwan Workers' Housing or El Marrazik Worker Housing in El Tebbeen

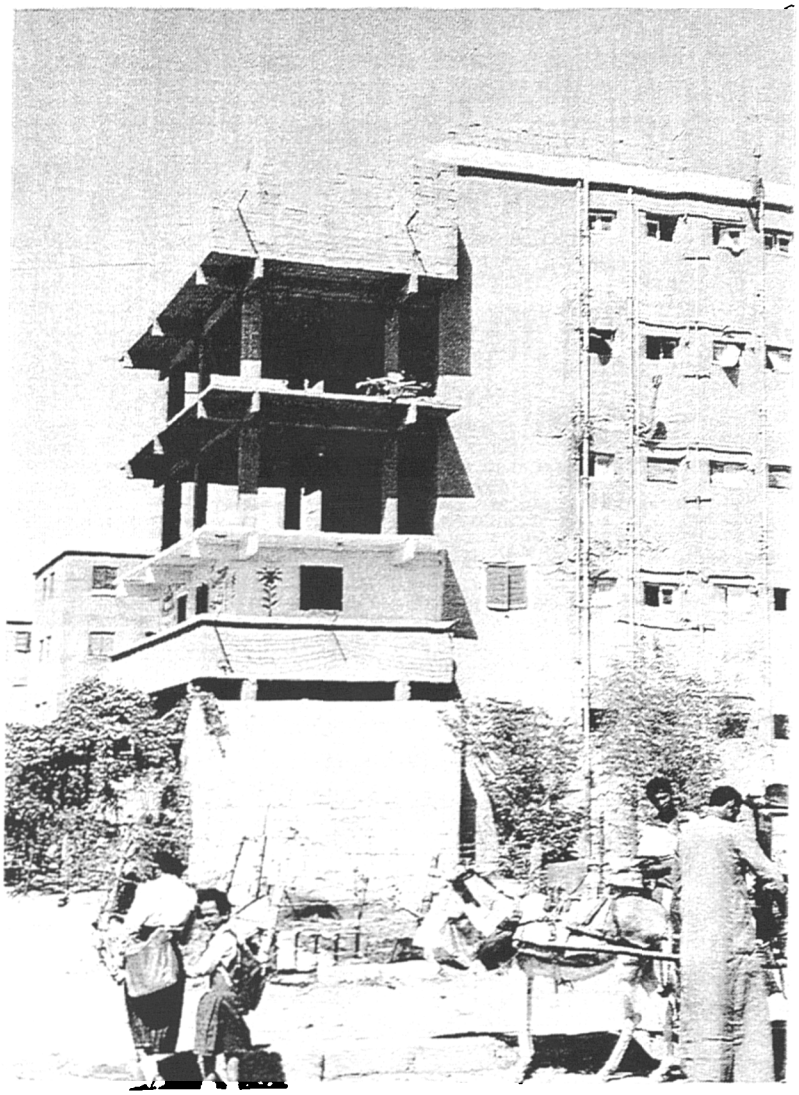
case, is the group of neighbours who are sharing the same vertical section of the five storey block of flats. Hence the basic social unit in such cases is a group of five households who are all affected by the attitude that the rest of their neighbours might adopt towards the extensions.

There are several issues which they should agree about in order to make such a process feasible, e.g, whether to extend or not or when to extend and how ? Certain levels of pressure is applied on neighbours to join in the extension in the communal type, especially if their reluctancy to join would affect the rest of the group.

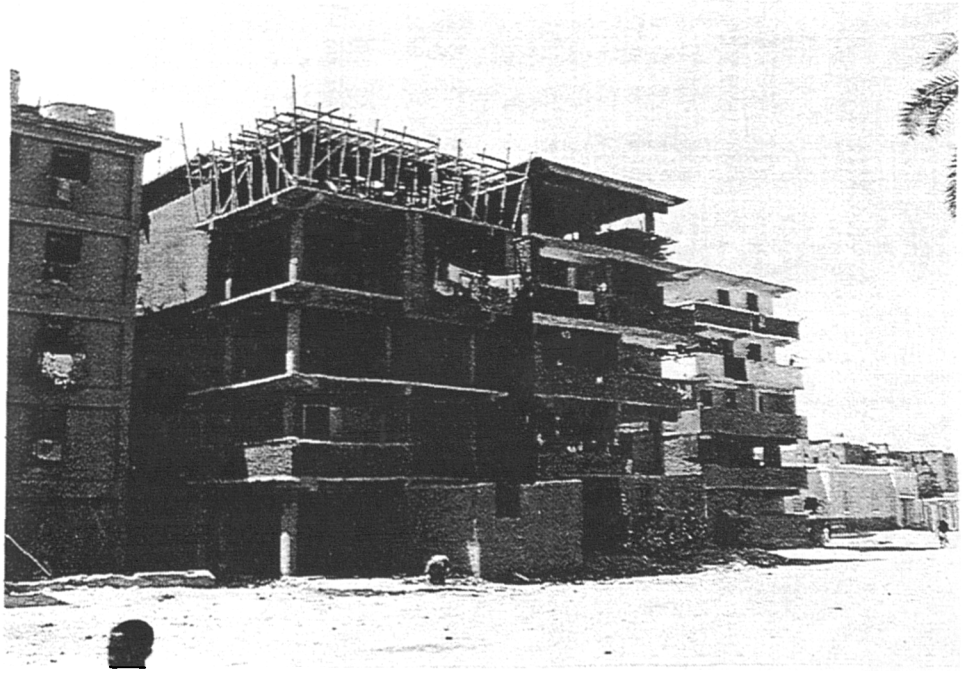
However, some among them might experience certain degrees of freedom of choice in relation with the location of their flat, e.g. the fifth floor household could always pay only his share towards the implementation of the foundations,then can build later on the extension individually, using a bearing walls structure. On the other hand the ground floor user has the least level of freedom of choice ( Pics. 4.1 and 4.2).

In contrast, in the individual form of extension, the freedom of choice is maximised among all the households. The limitations, in this case, are more the physical and the legal rather than being influenced by the attitudes of their neighbours. In the case of the communal extension form, the decision making process is quite complicated, because of the several factors involved.

Generally speaking, the economic logic usually provides the igniting motivation of "raison d'etre". But in a



Picture 4.1 A fifth floor resident enjoying the freedom of choosing when and how to build his extension.



Picture 4.2 A Ground Floor resident persuaded to demolish his previously built externsion in order to allow the constrcution of a multi-storey extension.

case of multi-storey extensions one cannot underestimate the strong influence of the other factors such as those of a social, cultural, political and personal nature. In this part of the study different themes are being identified as influential factors which determine the users' decision making process. However, there is no effort made here in order to group such themes under different title such as social factors, economic factors etc., as it is quite difficult and rather unrealistic to attempt to do so.

### 4.1.1 Risk calculation factor.

This factor has a decisive influence on determining whether the process will be carried communally or individually. In other words, it determines the basic social unit which will be responsible for carrying out the process. It is simply a logical deduction achieved through weighing the benefits against the risks involved. In order to do that two estimations are made:

a) Estimation of the weight or significance of the users' power against the local authority power.

b) Estimation of costs against benefits.

### A. The estimation of the weight of users' power against local authority power.

It is obvious that the public workers still emerge and as a special social group of the Egyptian society. The most important feature that characterises them as a social group is that they are more conscious about their rights than any other group (El Messiry, S., 1985:260).

The public workers in Egypt owe their existence and identity as a special social group to the 1952 revolution. They were among the groups that benefited mostly from this revolution. They practice their political rights through their strong unions, which allows them to act as a pressure group. One area, and certainly an important one, in which they can practise their political pressure is in expressing their housing needs. As users in Helwan or El Tebbeen Workers' Cities they are more capable of putting pressure on the authorities than any other users of public housing. The weighing of the users' power and its significance as opposed to the local authority power can be established through the assessment of the following events or circumstances:

- relating events.

The son of 'Um Abdou' in the Imbaba case study, explaining why they are hesitant towards finishing off the new flat which they started to build two years ago on the roof of the block. "The local authority were demolishing the private houses which were obstructing the new road a few steps from us.(1) Those houses and the land were taken from their owners who had been living there a very long time. They were given very little and almost useless compensation. If they can throw out the people from their own property, there is no doubt that

---

1. Ezbette-Aziz is one of the few villages which still exist within the urban boundaries of Cairo. They are almost like isolated islands within the city. They are villages in terms of the physical planning form but in terms of their function, as they are not attached any more to any agricultural land.

they are equally capable of demolishing the extensions , whenever they like, especially if it is built on government property."

Another case; Abdul Rahman feels more and more secure towards investing in the extensions. "They cannot do anything towards it, if they attempted to demolish the new constructions (the extensions), the whole block will collapse. This happened before and they had to stop the demolition". Another explanation about the users' sense of being safe from legal threat, came from the son of 'Abou Abdou', "The President of the Republic himself gave us credit in one of his speeches, he said that we are giving a good examples of self-dependence and that we did not wait for the government to solve all our problems."[1]

- previous experiences.

In the Imbaba case study the wife of 'Abou Abdou', explaining her fears about the completion of the new flat on the roof; "The neighbours in the opposite block have previously built two rooms on the rood like us and after they were almost finished the authorities cam and demolished them That happened after they had been reported by an envious neighbour who was not on good terms with his unfortunate

---

Note 1. I could not trace this incident but during the interview with the Helwan Municipality representative he said that the President has praised Helwan Public Workers sense of community in general;not the extension activity. He added that it is illegal to build extensions in public housing schemes under any circumstances. That does not give the users any legal right to extend their flats.

neighbours. "I personally do not have enemies where, but who could know what the inside of human beings could be." Another incident which might have had a great impact on some of the users:El Said, talking about his experience with the demolition of their extensions:"The local municipality came with a lorry and tried to knock down our extension by driving the rear of this lorry against one of my columns. They managed to cause damage to this column, but they stopped as they realised that the whole block would collapse is they carried out the demolition of the rest of the columns. They could not do it because the contractor had tied the new reinforcement with the olds one. We fixed the damage later on by adding more columns." This story was further supported by other sources.

- Security of Tenure.

Um Ali expressing her feeling of security towards the situation: " We own those flats now, they cannot throw us out ... of course they can come and try to demolish the extension, but why would they do that? No one will benefits form it. On the contract, that would cause unwanted trouble to both sides. Moreover, the extensions are not bothering any one."

It is important to note here that all the interviewed households of Helwan and three out of the five households interviewed in El Tebbeen have already acquired the flat ownership. By a presidential decree issued in 1979, many of the public housing units were transferred from rental to owner-occupier in order to shift the maintenance

responsibility from the state to the user. It was established that any user who had contributed to pay his rent for 15 years would automatically acquire the ownership. Otherwise, he has to pay in cash the remaining sum of money.

In the case where the period of tenure is less than 15 years or if there was any deferred rent, the majority of the prices of the public housing units were between E.L 700-1000, which represented the initial cost of those units built during the 1960s. So, actually by 1980 the majority of Helwan, El Tebbeen and Imbaba residents should have already acquired their flat ownership. In Um Taleb and Kamel cases in El Tebbeen, they did not acquire the ownership because of the deferred rent. In Imbaba, on the other hand, only one out of the five interviewed households has already acquired the ownership, which is Abou Abdou. The rest did not mainly because of deferred rent. However, this state of affairs is not necessarily due to their actual inability to pay the rent, as much as it is due to their reluctance to pay as they realize that it would not make much difference in terms of security of tenure if they became owners. Under all circumstances their tenure rights are established for life.

**b) Estimation of costs against benefits.**

Weighing the costs of extensions against the benefits which could generate from them is a very important process which takes place in the mind of each householder before deciding whether to extend his flat or not. However, in the case of multi-storey extensions, if the household's

decision was negative towards the process, it would remain very vulnerable to changes. This would be mainly influenced by the social pressure applied against him by the rest of the households who are sharing the same vertical section of the block. Kamel's wife, who lived in a gallery type flat with a total area of 27 m2, explained why they welcomed the proposal of the contractor to extend the flat. "The new room cost us about E.L 1000, that is a large sum of money compared with my husbands salary (about E.L 100). We had to sacrifice some things because we needed this room desperately. We were already nine persons living in this flat, when my mother-in-law and later on my divorced sister-in-law had to come to live with us....The contractor accepted half of the costs in monthly repayments which made things easier."

El Said in the Helwan case study justifying the additional extensions of three rooms commented that [1]: "I do not need three more rooms immediately but it is good to do it now. The construction costs are rising madly. Now I have a certain amount of money.[2]. Tomorrow it may be worthless, I'd better do it now for the children."

---

1. "El Said' lives in a two room flat on the ground floor. His flat is located in the end of the block, that is why he could add more rooms to the other side of the block. The first extension of one room in 1979 cost him E.ů120 for the concrete skeleton, the three room extension is costing him now E.ů3000 for the concrete skeleton.

2. El Said has received the end of service award.

### 4.1.2 Communication among the households.

In the individual type of extensions the required communication with the neighbours is minimal compared to the multi-storey type. The purpose of such communication in the individual type will be limited to avoiding the neighbours' objections by asking for permission if the construction process is likely to disturb them. Of course there is no guarantee that such policy will always achieve its goal.

From the Abou Farag case: "We told our neighbours at the beginning and explained how much we needed the room, they had done the same with us before when they built theirs. We knew they would not object but it was better to ask them so that no one can complain later on." The other purpose of communication if to learn from the neighbours' experience with the extension.

On the other hand in the multi-storey type of extensions the communication among the group of users who share the same vertical section of the block is fundamentally essential. In this case the communication among the neighbours experiences two stages: the first is the regular encounter stage and the second is the planned meetings stage.

a) The regular encounter stage of communication.

This is the stage when one households or another starts thinking about extending his flat. They would start by declaring their intentions to the rest of the neighbours in the same block, and explaining their need for

the extra room and expressing the benefits of doing it immediately. That can happen through the communication among the men in the factory, the social club, cafes or when meeting in the street or on the staircase.

Another very important, and more reliable way of voicing their thoughts is the usual and daily visits of women to each other. The extension's topic will be brought out, in this case in a natural and almost incidental manner. The women's role in the extension process is undeniable and rather essential. Not only because they are partially responsible for the affordability or the process, but also because they are important participants towards the social pressure factor, which will be discussed later on in this part of the study.

El Said's wife describes how the subject of the extension was first brought to the knowledge:"The woman on the first floor told me that her husband was thinking of asking my husband about the possibility of us sharing with them and the second floor neighbours in a concrete extension for one room. It was obvious that they had already agreed with the second floor neighbours but of course our agreements was essential.[1]

---

Note 1. Before joining the rest of the neighbours in the present extension, El Said had built himself a timber roofed balcony on the outside of his flat, which he had later on filled in, converting it into a room. He had to demolish it in order to allow for the joined concrete extension.

b) The planned meeting stage

This stage starts after the informal approvals from the involved households have been established. It is a stage of agreement about the implementation details. Those meetings can be held in one of the flats or in one of the cafes. In these meetings, suggestions about the contractors appointment, and the estimation of costs etc. are made.

Naturally, in the case of the contractors being the motivator or the organiser of the process, the sequence of events might differ slightly. As in the cases of Kamel and Um Taleb in the El Tebbeen case study the contractor was actually knocking on the doors offering his services. Also in the Hassan case in Helwan , the contractor accompanied by one of the neighbours from the same block, who was a friend of his, was visiting each flat. Kamel, Hassan and Um Taleb all live in the same gallery access type block, where the social contact between the neighbours is continuous and unavoidable.

### 4.1.3 Leadership among the group.

Although in the case of the multi-storey extensions the group works in a communal pattern of behaviour, the element of leadership is not at all missing from their organisation. The leading character can be the original motivator who started the process by suggesting it. In other cases the household with the most experience of construction activities can be the leader.

The appointment of the leader is not arranged; but his leadership is usually established gradually with the

progress of the process, and according to his personal qualities as a leader or his use to the group, or in some cases, according to the availability of the time that he can offer e.g. El Said was a leader in his group, he introduced the contractor, the meetings were held in his flat and the contract was written in his flat and according to his recommendation. He also kept the contract with him, although in this case he was not the original motivator as mentioned before, and later on after the structural damages caused by the local authorities in the unsuccessful attempt to demolish the extension, he was once again responsible for leading the group through the restoration process.

### 4.1.4 Social pressure factor

There are two kinds of social pressure which are applied by those willing to join households against the unwilling; the direct and the indirect pressure.

**a) The direct social pressure.**

The direct social pressure can be applied against the reluctant neighbours in many forms, among them are the following:

- Accusing them of working against the common benefit of the group. Naturally the amount of pressure applied on the lower floor households, especially the ground floor is more than that applied on the higher floors' households, especially the fifth floor.
- Accusing them of causing more suffering to the group and financial losses by delaying the construction of the extension while the prices are continually rising.

- Insinuation of losing old friendships. Like in Um Ali case in El Tebbeen case study: she was reluctant to join the neighbours at the beginning. As she lives in the ground floor flat, the pressure from all of the neighbours was increasing for her to join, until she finally agreed. In Um Ali's words, "I did not want to join at the beginning. The neighbours' desire to extend coincided with my problems with my husband and later on our separation. I was not sure how we were going to manage the costs of living, never mind the costs of construction. But I felt that I am going to lose the friendship of some of the women neighbours, whom I like very much. They are very old acquaintances which no one would be easily willing to lose. We help each other in small things, like taking care of the children, borrowing certain things, they are all things which make life easier for us. However, one of the neighbours helped me in getting some charity money [1] to encourage me."

**b) The indirect pressure.**

The extensions, as owning any other material goods, are considered a source of self expression and social status in the Egyptian society, no matter what strata this society belongs to (Wikan, U., 1985:51).

---

1. An employer in one of the factories and at the same time he writes on a piece basis in one of the National Newspapers which runs the charity business.

Investing money in improving the house is one of the ways of self expression of the economic abilities and hence achieving some sort of self realisation.

From another angle, a larger house or flat offers a better opportunity for the households to set aside a room for receiving visitors, or what is called a salon, which is a guests' sitting room, without having to utilise it as a bedroom.

Receiving guests in itself is one way of confirming the social status of the households, especially if the guests belong to a slightly higher status. (Wikan, 1985). That cannot be done without having a sitting room, or at least a non-overcrowded flat which also plays a very important role in children's marriages, especially during the engagement period, during which time each family tries to show the superiority of the living conditions. Failing to join the neighbours in the extension because of economic inabilities can affect the householder's image among his neighbours.

In addition to the fact that it will deny him enjoying the benefits of the additional rooms. In the case of Abdul Rahman his wife reveals: "Abdul Rahman was the head of his department before retiring, the neighbours would have found it strange if we did not show willingness to extend our flat. They would have thought that we were not helping ourselves."

## 4.2 The Financial Mechanism.

The approach of analysis followed in this part if mainly a comparative one. However, the comparison will include only two sites out of the three which is Helwan and Imbaba. El Tebbeen was disregarded because the financial mechanism which has been applied there is quite similar to that which is applied in Helwan case study.

In the multi-storey type of extension, as in Helwan and El Tebbeen case studies, there are two main actors who act positively towards the process and are deeply involved in it: the user and the contractor.

On the other hand, in the individual type - Imbaba case study - there is no contractor involved but labourers are hired to carry out certain building jobs. The labourer's role in the individual type is much less important than the contractor's role in the first type. The local authority's role, too, in the individual type of extension is a negative one, as it actually acts towards preventing the extensions rather than ignoring them as in the cases of Helwan and El Tebbeen.

### 4.2.1 Users' Affordability.

The expenditure pattern of Mahmoud was chosen as an example from Helwan. Mahmoud represents a wide sector among Helwan Workers' City households. He is middle-aged (45 years old). He is a public worker who has spent 15 years in

his job. He prefers to educate all his children, so he is the only earner in his family. The extension's total cost represents almost five times Mahmouud's monthly income. Mahmoud used different auxilliary resources in order to assist him to finance his extension. These were:

1. Borrowing from the contractor with credit;
2. Selling his wife's jewelry;
3. Borrowing credit-free from work friends; and
4. Joining a savings club.

The contribution of each of the sources can be seen from Figure 4.1, which illustrates Helwan household estimated incomes, sources of income, the auxiliary resources which contributed to the extensions costs in each case as well as the improvement in internal overcrowding. Mahmoud is being referred to under "E" in the Fig 4.1 . Mahmoud is still paying the contractor the monthly repayment while the repayments of the Gamiya, at the time of the interview, were about to stop.

The extensions built consist of two rooms with concrete skeleton structure, brick walls and quite a reasonable standard of finishing. From Imbaba two cases were chosen: the first is Abou Abdou and the second is Abou Farag. Two cases were chosen here because of the difficulty in finding one household which would serve as an example which could represent a reasonable sector of the Imbaba Nasser Housing households. Abou Abdou was chosen to represent the higher changeable income and Abou Farag to represent the low stable income.

In the case of Abou Abdou the extension consisted of the construction of the walls (bearing walls) of a two bedroom flat on the roof. The new flat is supposed to be similar to the initial flat on the fifth floor. Only one room has been roofed with the use of corrugated sheets. It is the only habitable room in the extension. The area is about 12m2 (Fig.3.22). This extension was built four years ago. No development has been introduced since then. A steel ladder had to be constructed at that time to give access to the roof within the initial staircase space. The extension cost then was about E.L 750. At that time the family total income was about E.L 280 per month. Hence the extensions' cost represented about 2.8 times the total monthly income.

In the case of Abou Farag, who lived on the ground floor, the gained area is only about 6m2 (Fig.3.21). The area gained was utilised as a bathroom and a kitchen, as the original kitchen and bathroom were transferred there to allow a space for another room inside the flat. Half of the gained area was already roofed by the balcony that gives access to the first floor flats.

Abou Farag now is receiving an early pension. Three years ago, at the time the extension was built, he was still working at the public factory of weaving and spinning. His salary by then was about E.L 110 per month. As the total cost of the extension was by then about E.L 200, so it represented only about 1.8 of the household monthly income.

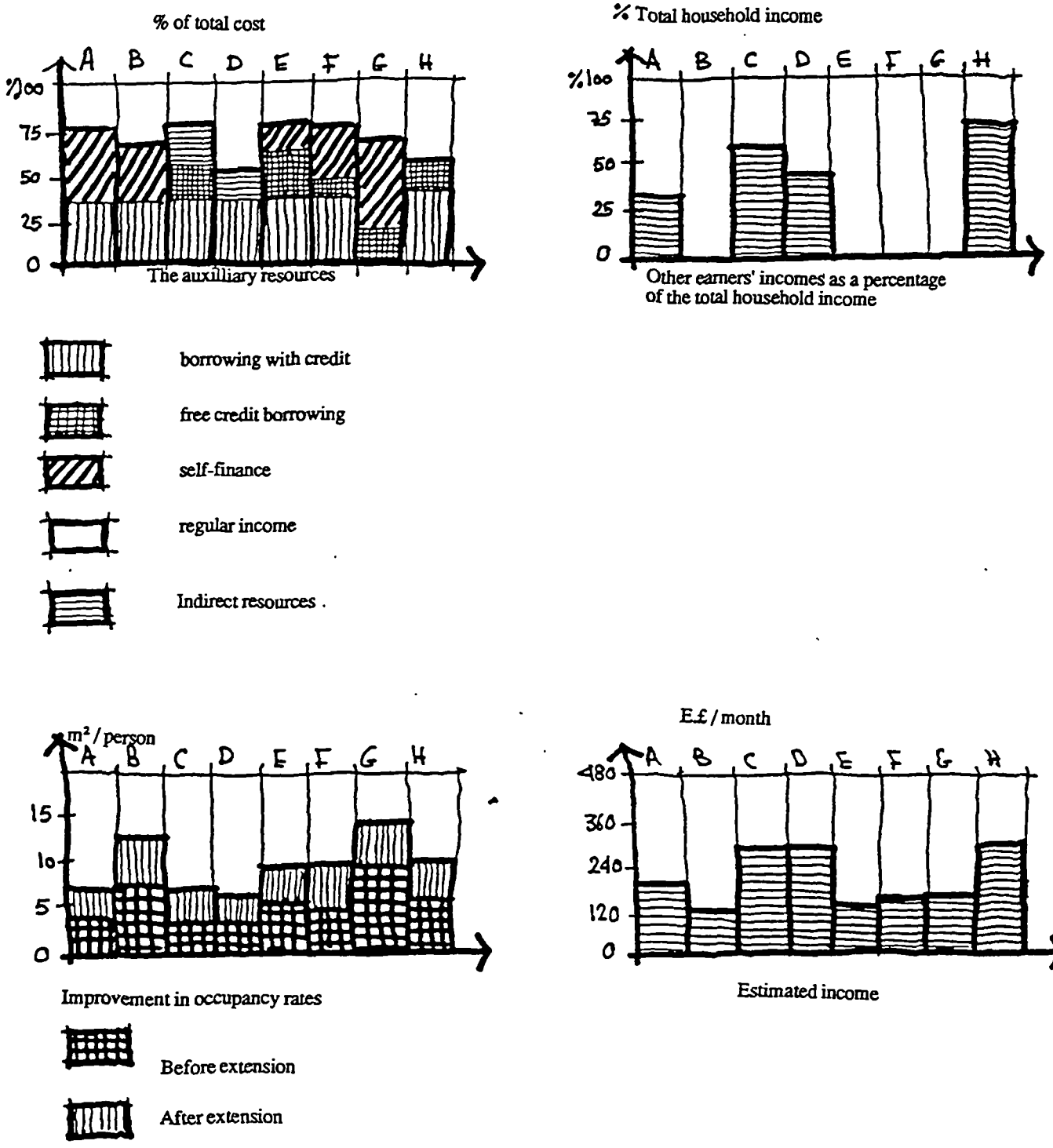



Fig. 4.1 The extensions' finance (the Case of Helwan).

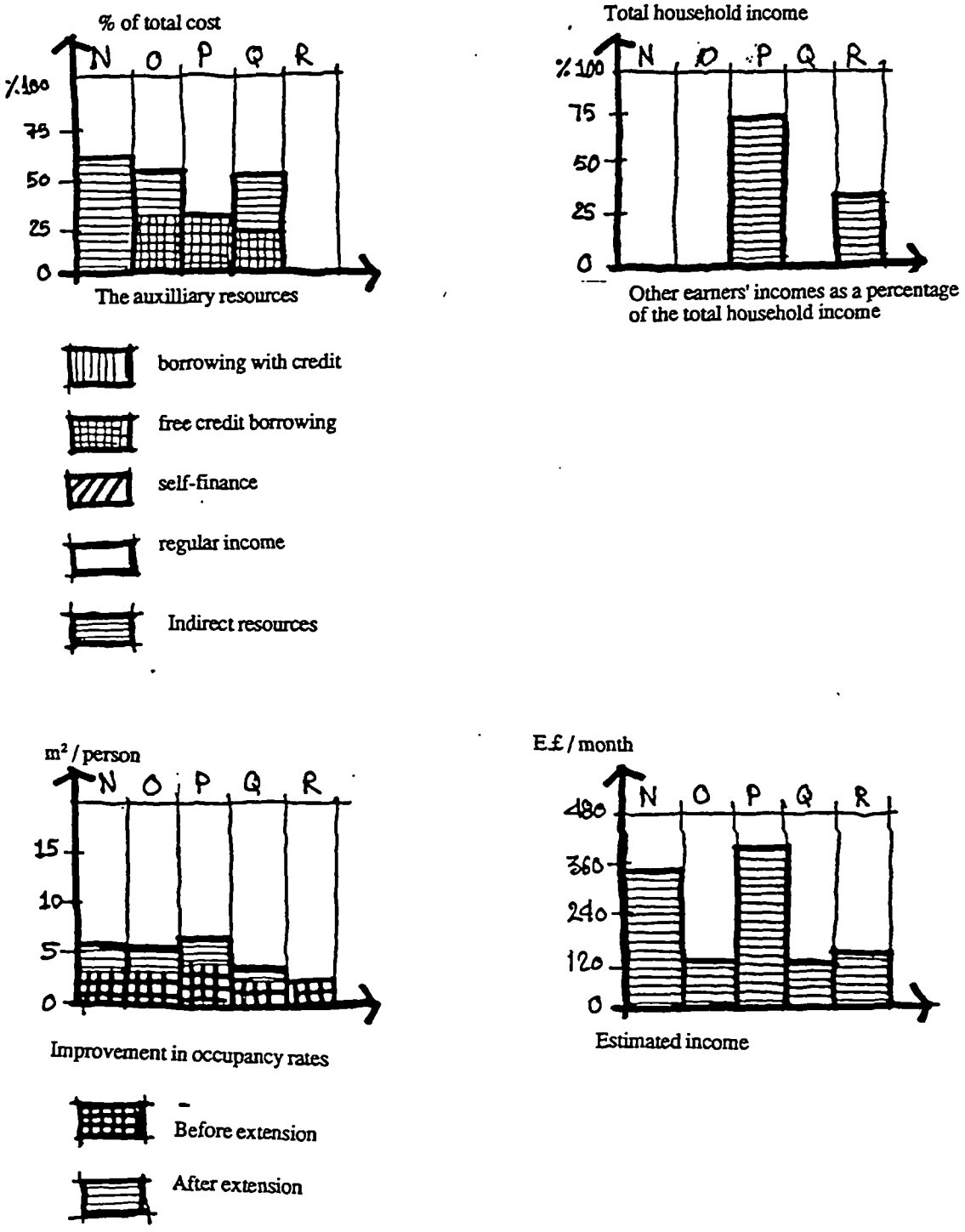



Figure 4.2 The extension's Finance (The Case of Imbaba).

Figure 4.2 illustrates Imbaba households' estimated incomes, the corresponding resources of income, the auxiliary resources contributions to the extensions costs as well as the reduction in overcrowding in each case. Abou Farag is being referred to by 'O' and Abou Abdou by 'P'.

Here the factor of the local authority attitude clearly seems to be affecting the amount of investment put into the process and hence the quality of the extension. In addition to the fact that this attitude prevents the existence of the group action and consequently cancels the need for the contractor, both as a builder or as a financing participant in the process.

### 4.2.2 The Flow of Funds.

The flow of funds in the Helwan or El Tebbeen case study is actually as shown in Figure 4.3 a. The contractor in this case plays a dual role: he acts as a builder and at the same time as a financier. He supplies the user with credit. The interest rate which he usually charges would amount to about 15%. His net profit as a contractor is usually about 10% of the contract value.

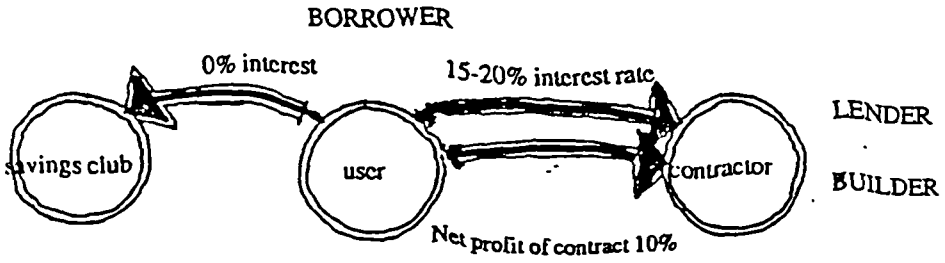
In an alternative pattern of action, he would act only as a financier of lender to the user and use a subcontractor as a builder. The subcontractor is usually one of his labourers. In this case he finances the user charging the same interest rate. He also lends the subcontractor capital, enough to buy about 2 m.sq of timber - which costs him about E.L500, in order to start his career as a

contractor. In this case the sub-contractor received most of the contract profit (Fig.4.3.b). The contractor benefits from this method of work in three ways:

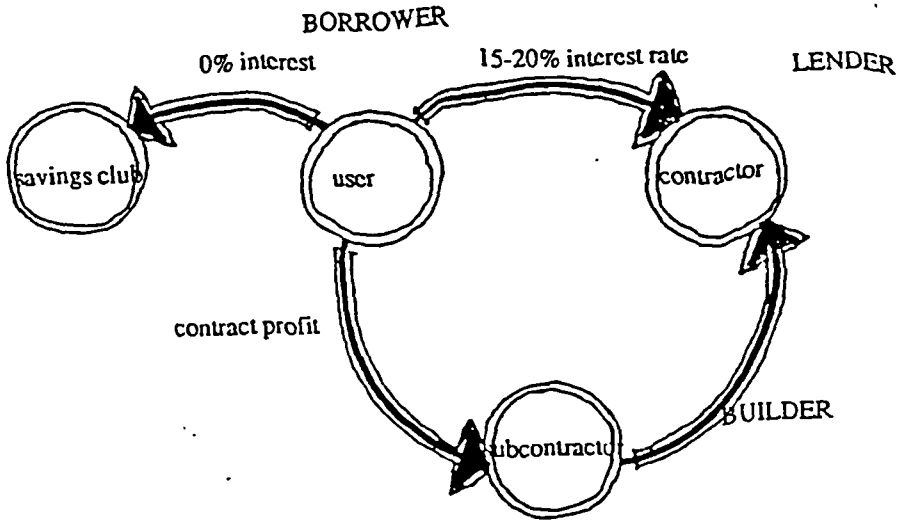
1. To avoid the legal consequences in the case of local authority of police intervention:

2. Broadening his lending base, which means he is less affected by defaults of repayments in case of stoppage of the construction process in some cases, or in cases of users who cannot pay; and

3. If the work in one of the blocks was stopped by the police it does not affect the rest of the contracts which he is involved in.




(a)




(b)

Fig 4.3 The Flow of Funds in Helwan and El Tebeen.

Meanwhile, as the user borrows on 15% credit rate from the contractor, he actually saves in a free interest rate from the Gamiya saving clubs. In the Imbaba case, a much more simple financial mechanism is involved in the process, as shown in Figure 4.4.

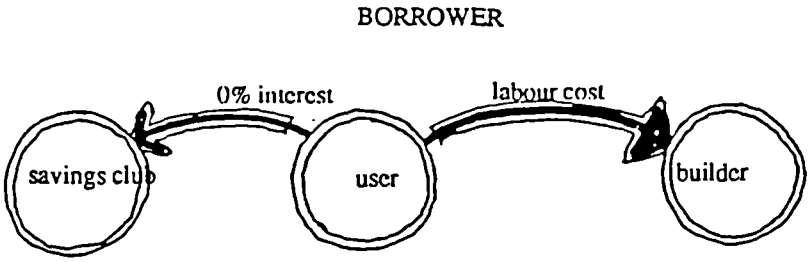



Fig. 4.4 The Flow of Funds in Imbaba.

### 4.2.3 Extension Finance.

In order to show the significance of the financial investment put in by the users in implementation house extensions, Helwan Economic Housing is chosen as an example.

If it was assumed that only three quarters of the total number of Helwan Economic Housing flats have been extended (which is quite an underestimation according to the local authority) and assuming that every unit was extended by only one room (which too is an underestimation) then calculating the total investment according to the cost of E.L120.00 m2, the total investment would amount to E.L 7,344,000. This amount of money is raised by 5000 households. It is equivalent to the price of 680 two roomed public housing flats, according to the official 1988 prices.

In conclusion, some remarks about the extension finance. Looking at Figures 4.1 and 4.2 as well as the corresponding extensions built by the thirteen households being referred in these two Figures, some conclusions can be made:

1. In Helwan the variety in income levels is mainly due to the existence of more than one earner in the household, which is more likely to be the older son.

2. On the other hand, having additional earners does not necessarily mean that more funds would be available for the extension costs, as other financial obligations are likely to arise, such as preparing daughters for marriage. However, in most of the cases the additional earners did contribute to the extension costs if required, as well as to the regular household expenditure.

3. The higher incomes do not necessarily affect the householders' decision to join a savings club in order to raise the down-payment; he often would remain willing to join.

4. In some cases, the future, rather than the present, need for more space often determines the householders' decision to extend their flats. In other words, it would be considered as future investment. As in 'G' case he decides to extend his flat in spite of the fact that he enjoyed quite a reasonable rate of undercrowding before the extension and in spite of the fact that he is on the

fifth floor, which means that he was not exposed to directpressure from the rest of the neighbours and it is almost the same in case 'B'.

5. Although some might enjoy higher incomes than the others, they still prefer to follow the same financial mechanism by dealing on credit basis with the contractor rather than paying the whole cost in cash.

6. In the case of Imbaba the users' decision not to extend is not wholly financial but mainly due to fear of demolition. However, when some of them decide to extend inspite of the insecurity involved, they tend to minimise their investment in terms of materials and space. They also seem to be slightly more confident if they do not build their extensions on the government land assuming that the local authority would not be so anxious to demolish it, which results in the construction of suspended balconies and rooms as well as in the construction of the extensions on the roofs of blocks. They also tend to depend more on self-help concerning the implementation of the extensions than the users of Helwan or El Tebbeen, in order to cut the extensions' costs.

## 4.3 The initial provision design and structural constraints.

The layout planning, the housing design and the structural elements of the initial provision present a context of pre-determined circumstances and form a well defined set of physical constraints, which both the user and the builder have to conform to and act within their limits.

### 4.3.1 Residential Unit Size and the available space for extension.

Through examining the occurances of the extensions in relation to the initial number of rooms in the residential unit, it became clear that the smaller the units were, the more determined the users became to extend them. Fig 4.5 shows the blocks before the extensions were made whilst Fig.4.6 shows the 68 surveyed blocks with the extensions. Table 4.1 shows the number of units which have extensions per floor and for the different unit sizes. As can be seen from Table 4.1 only 23% of the three roomed flats had extensions whilst about 95% of the two roomed flats and 94% of the one roomed flats had extensions.

| Floor | 1-roomed Flats Total. | Exts. | % | 2-roomed flats Total. | Exts. | % | 3-roomed flats Total. | Exts. | % |
|---|---|---|---|---|---|---|---|---|---|
| Grnd. | 80 | 79 | 99 | 256 | 251 | 98 | 156 | 54 | 35 |
| 1st. | 80 | 77 | 96 | 256 | 248 | 97 | 156 | 35 | 22 |
| 2nd. | 80 | 75 | 93 | 256 | 242 | 95 | 156 | 31 | 20 |
| 3rd. | 80 | 74 | 93 | 256 | 238 | 92 | 156 | 31 | 20 |
| 4th. | 80 | 72 | 90 | 256 | 236 | 92 | 156 | 29 | 19 |
| Total. | 400 | 377 | 94% | 1280 | 982 | 95 | 780 | 156 | 23 |
| Rf.ext. | 80 | 9 | 11% | 256 | 21 | 8% | 156 | 35 | 22% |

Table 4.1 The occurence of extensions per floor and roof in the 1, 2 and3 roomed flats.

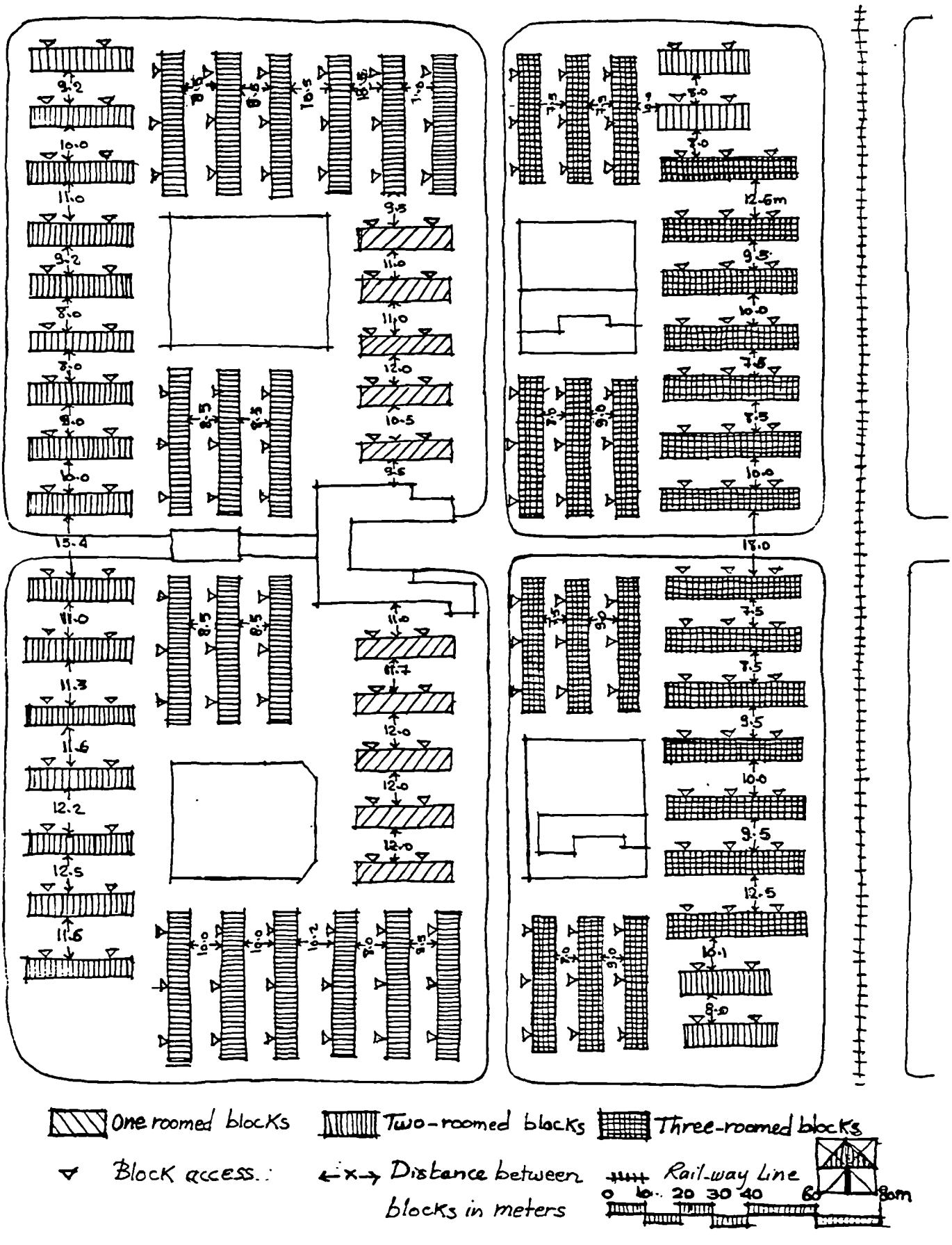



Fig 4.5 The 68 blocks before extensions.

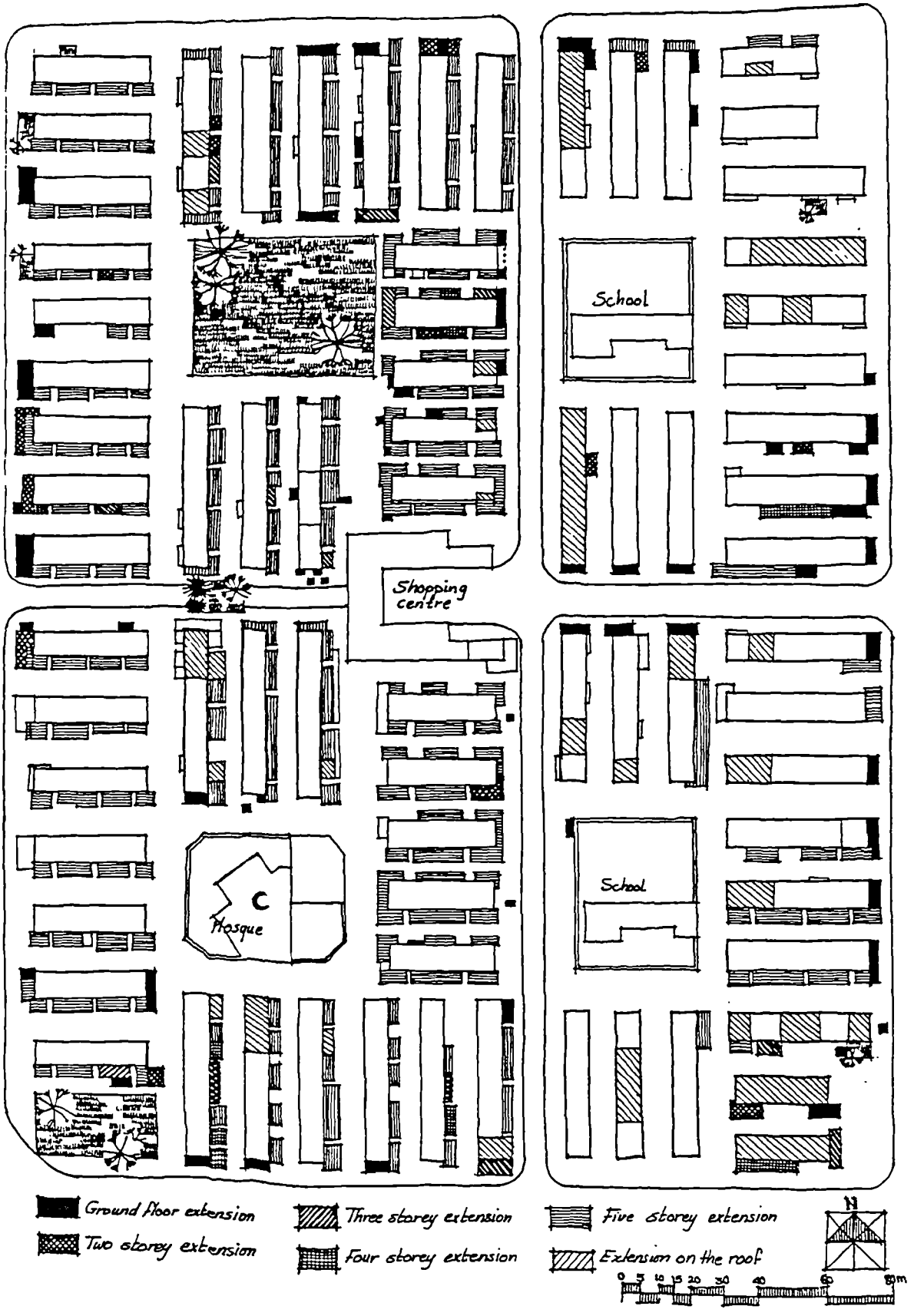



Figure 4.6 The 68 blocks after the extensions.

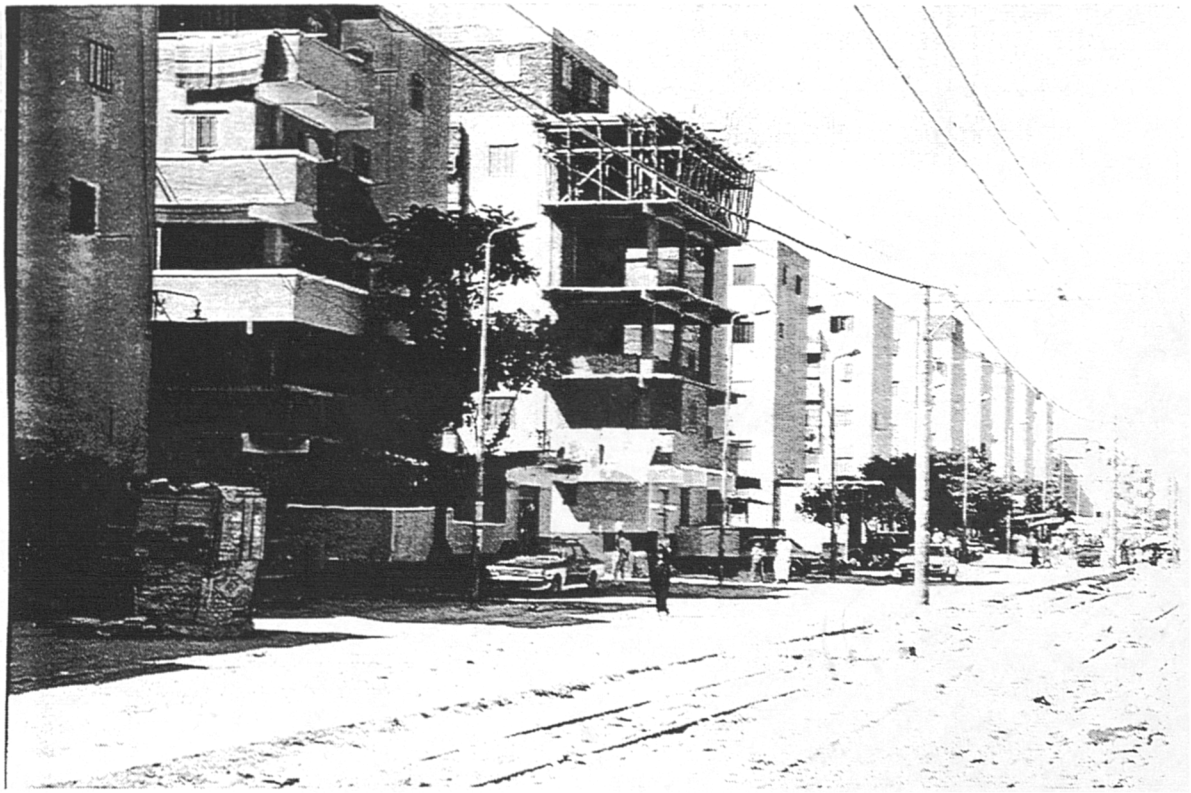
However an interesting phenomenon was found. There were more extensions built by the 4th floor residents on roofs of the three roomed blocks of flats than in either of the one or two roomed blocks.

22% of the three roomed fourth floor flats had extensions on the roof whilst only 8% and 11% of the two and one roomed flats respectively, had extensions. Also many of the three roomed blocks had extensions built on the side of the block. So it seems that although some of the three roomed flats are keen on extending their flats they cannot put enough pressure on their neighbours to extend communally.

It also seems that some of the residents of those same blocks consider the space between the blocks to be insufficient to accomodate extensions. These views were expressed by some of the residents who have extended to the sides of the blocks and who were not permitted by the residents of the blocks opposite to build extensions in between.

However when the space between the blocks was measured it was found that the three roomed blocks have in fact less external space than in the case of the two roomed blocks. On average the three roomed blocks have a distance of 8.3 metres between them whilst the two roomed blocks have a space of 10.6 metres. Nevertheless it was found that the distance between the one roomed blocks was initially 8.5 metres on average but this did not discourage their residents from building extensions both to the front and back of the block. The remaining space between the extensions is down to

Picture 4.3 Unextended three roomed blocks three roomed blocks of flats in Helwan.



Picture 4.4 Three roomed blocks extended to the side of the block.

2.4 metres in some cases. Whilst the narrowest space in the case of the three roomed blocks would not be less than 5 metres when an extension of 3 metres depth is built.

It seems that there are different perceptions concerning the amount of space that should be allowed between extensions before privacy and daylight levels are infringed. It is most likely that the residents are inclined to trade off additional habitable space for more space between the buildings in order to safeguard their need for privacy and daylight.

The desire of the residents of the three roomed blocks to preserve high standards concerning space between the opposite facades can be demonstrated by the following example.

Abdul Rahman pointed out from balcony a block where extensions are being constructed (Pic.4.5). He explained that the extensions to the side of the block were stopped when the users in the block at the back complained that such extensions would be too close, about 8m. The users who are building the extensions seemed to be convinced and the extensions were stopped and the foundations were closed. Abdul Rahman then added that after two months the foundations were dug out and the construction proceeded in spite of further complaints. In the case agin, the informal code of practice or planning law is being ignored for the benefit of a particular group, rather than for a wider spectrum of the community. However the neighbours this time did not take any legal action.

Picture 4.5 Abdul Rahman pointing out the neighbouring extensions from his balcony.

### 4.3.2 Housing unit location in block and its effect on the extensions.

Obviously the position of the flat affects the freedom of choice of the household, whether to extend the flat or not, when, and how ? It can be noted from Table 4.1 that there is a consistent marginal reduction in the number of extensions the higher the floor in the block. In addition, both the fourth and the ground floor flats have the privilege of having a separate external access to the extensions. The fourth floor households have their private acces through the roof to the new fifth floor. The ground floor flat has the additional advantage makingf a private garden, a garage,a shop or a workshop. The location of the flat at the end of the balcony access i.e the end block flats, gives the householder the opportunity of gaining additional space to the side of the block. The phenomenon of constructing additional extensions to the block sides is increasingly taking place in Helwan and El Tebbeen workers' cities.

### 4.3.3 The Street to block relation and its impact on extensions.

Streets represent a firm limit to extensions. The width of the sidewalk in this case represents restraints on the extension's width. In the case of other forms of access and open spaces, the limits are looser. However, the extension's location on a street encourages the investment in building shops, which can be as a part of the flat extension, as the rest of the block, or in the form of an additional ground floor individually built extension. Fig 4.7 shows the distribution of the informal shops built by the users on the main streets and around the commercial centre.

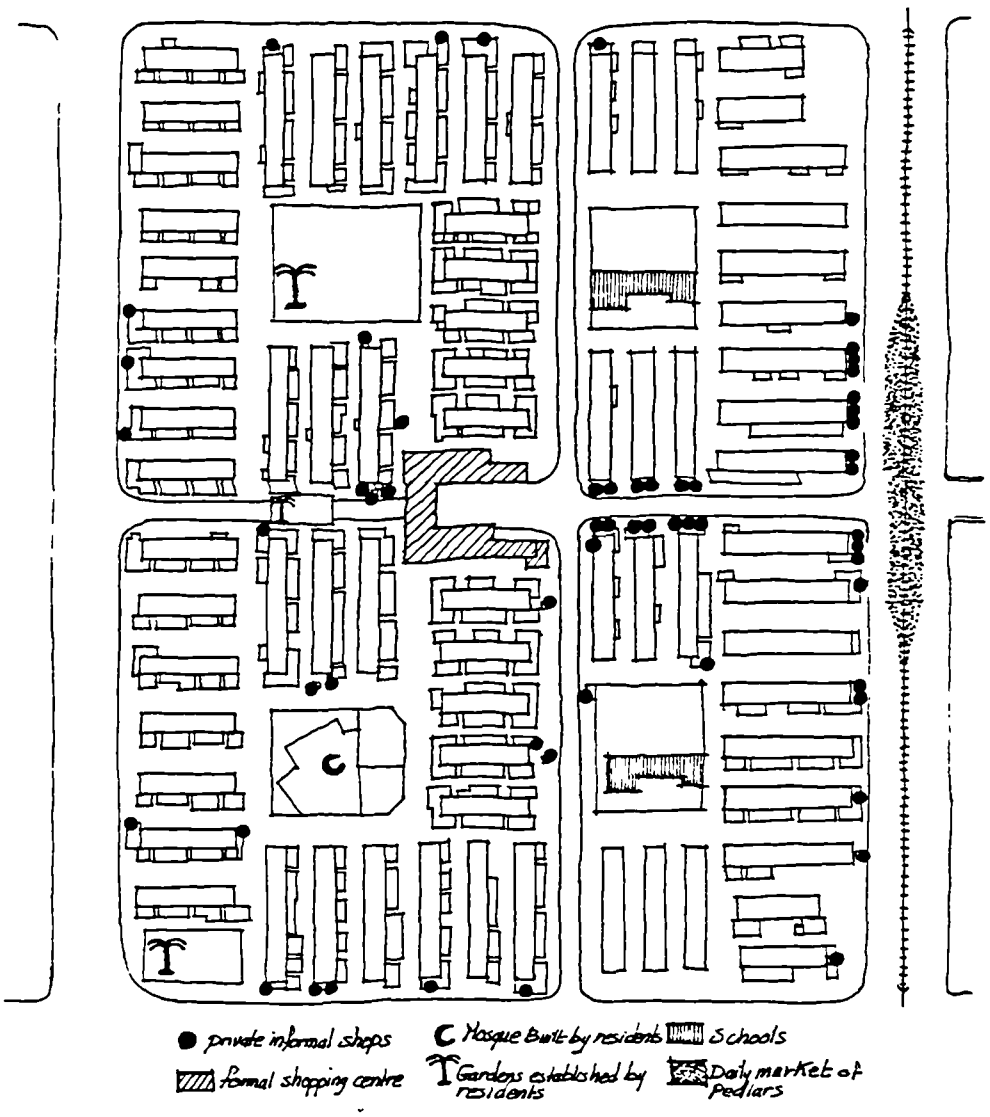



Fig 4.7 Helwan - The Location of informal shops..

### 4.3.4 Structural Constraints.

The structural constraints are not mainly a result of the structural properties of initial provision as much as it is a consequence of limited experience from either the user or the builder. However, the main structural problems created by the initial provision are actually related to the public utilities network and the locations in relation to the extensions. When these networks obstruct the construction of the extensions the contractor has to construct a simple concrete slab for the ground floor, or in some cases he would change the ground floor columns' position in relation to the other floors' columns, which is rather a dangerous solution, is not done properly.

As a consequence of limited experience, structural problems can happen. In El Said case the underestimation of the span (4.5m x 2.5m) resulted in sagging slabs and beams which required the construction of a further column. The fact that this extension was constructed in 1979, as El Said claimed, they were among the first people to start extension to blocks, provides an explanation, especially as it was also the first experience for the contractor who built it with this type of work. However, just a few steps form El Said , another extension - a more recent one - experienced the same structural problems.

Another factor in the El Said case might be the desire of the contractor to build a reputation of offering cheap prices to encourage other users to extend their flats. The price which he gave in the contract was E.L 10.7 / m2, a very low price at that time. So it is very possible that he

tried to cut the costs by using smaller sections for the reinforced concrete.

### 4.3.5 Extension's impact on the climatic performance of the dwelling.

As a result of the extensions a middle section of the plan of the dwelling is created and such a section is isolated from the external environment by the newly built extensions.

Lack of daylight as well as natural ventilation in summer and sun radiation in winter are the main problems. However, according to some of the households interviewed,, in the summer, the middle rooms which have no external walls or openings seem to offer a cooler place which they consider to be beneficial. The real problem which takes place in some cases, especially in the ground floor of the gallery type flats, happens when the external openings of toilets are blocked by extensions which result in unacceptable hygienic circumstances (Pic.4.6).

Picture 4.6. Blocking kitchen and toilet windows by extensions built on the ground floor of gallery type block in Imbaba.

### 4.3.6 Extensions accessibility and cultural considerations.

There are basically three forms of circulation concerning the informal accessibility of the extensions. Figure 4.8 shows these three forms.

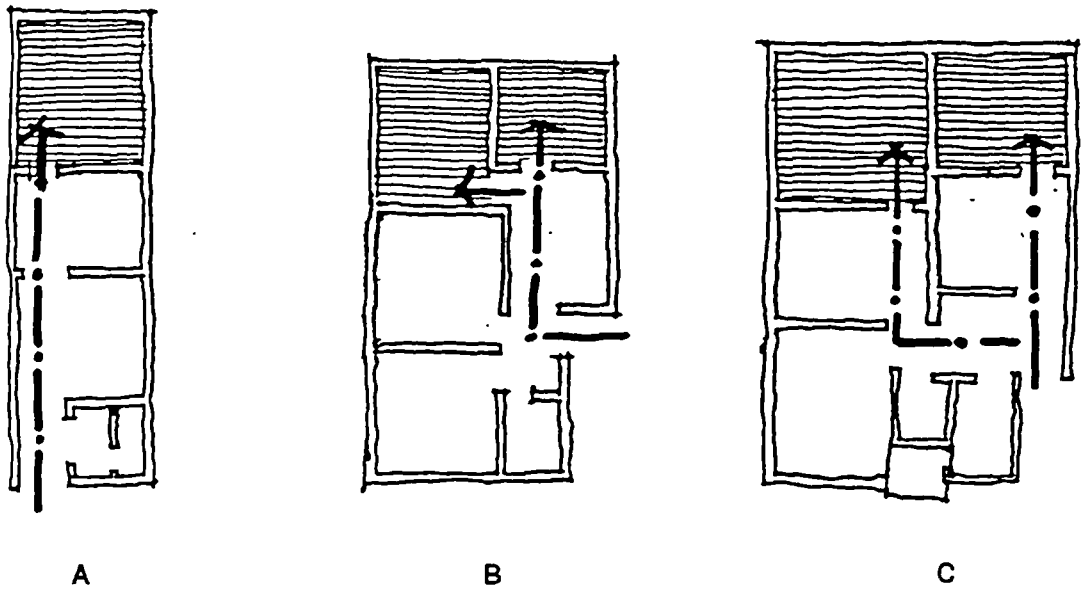
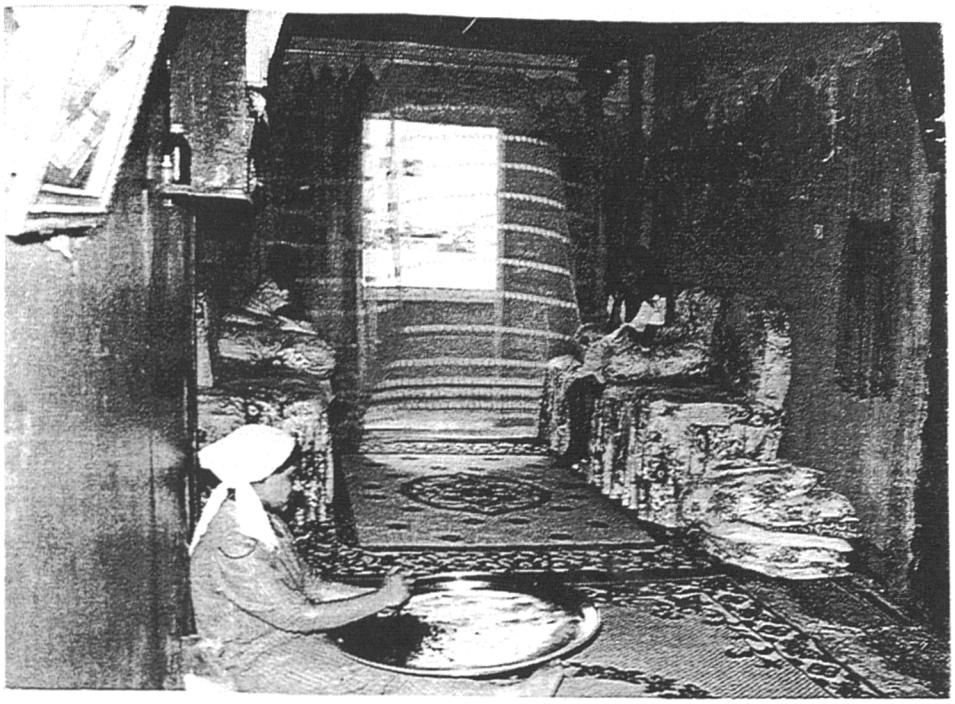


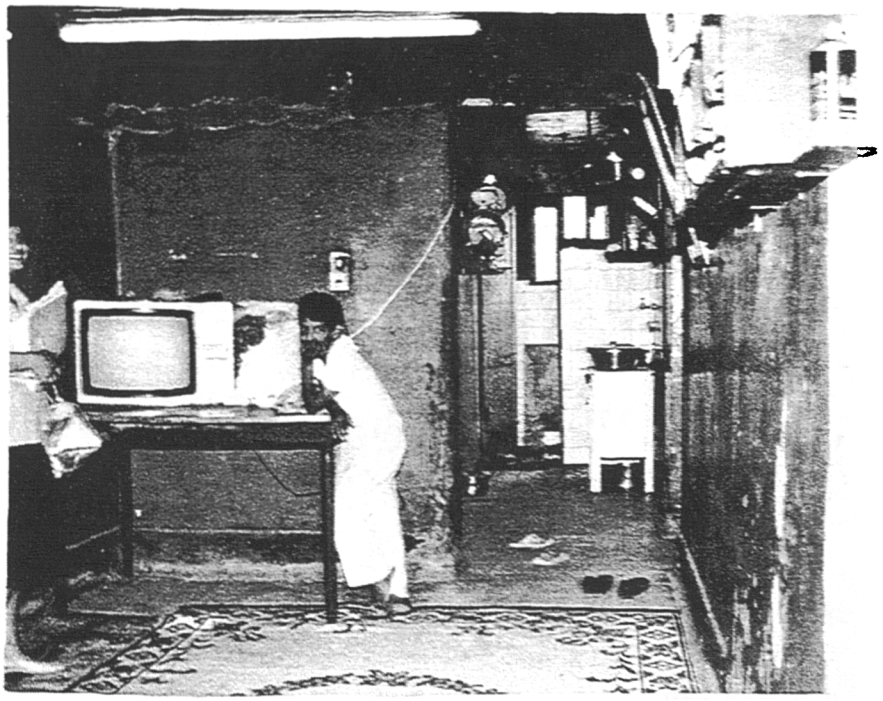

**Fig 4.8 The internal accessability of extensions.**

The elongated circulation lines in the case of 'A' is inevitable. Form the plan it seems that the circulation area occupies a considerable area of the flat, but in reality a lot of storage would be allocated in such areas, in an attempt to increase its use value.

Form 'B' takes place when a middle multi-purpose space is created. This hall, besides acting as a circulation area, accommodates various activities, such as eating, sitting, cooking and sometimes even washing clothes . ( Pictures 4.7 and 4.8 ).



Picture 4.7 Cooking preparation in the hall.



Picture 4.8 ...while the cooking facilities were transfered into the lobby...

Actually, the role played by such space resembles the role played by the courtyard in Egyptian rural housing. In the case of 'B' the mixing of different activities in one space does not seem to represent any cultural problems. On the contrary, allocating a certain room for the kitchen did not seem to be a matter of much concern to the users.

Frequently the kitchen was replaced by a living room and the cooking facilities were transferred to a narrow corridor, which in turn did not seem to cause problems of lack of cooking space, because, as was mentioned before, food preparation activities are often a systematic and time consuming process which usually filters out to the living spaces of the house, where the wife could sit comfortably while cooking as well as being able to perform other activities at the same time, such as supervising the children.

In the case of 'C' through-room circulation did not cause cultural problems, even if the rooms crossed are utilised as bedrooms, or at least it was preferred to a multi-purpose circulation hall. Obviously separation between different activities seemed to be more of a priority which is urban behaviour rather than rural.

## 4.4 CONCLUSIONS.

a. The users extension phenomenon will take place whatever attitude the local authority takes towards it. However, the quality of extensions and that of the environment declines when the local authority's attitude is a negative one rather than allowing the activity to take place or even ignoring it when it occurs. Where individual extensions occur very little attention is given to the communal good and the effect of the extension on other residents and the immediate physical context. This state of affairs often results in social conflicts amongst neighbours in addition to the probable structural problems.

b. When the local authority takes a more relaxed attitude towards the extension phenomenon, for instance by ignoring it, it encourages a communal and collective type of extension to develop. The communal type of multi-storey extension results in better quality of built environment than the individual type,

c. The individual type of extension ( as in Imbaba ) tend to rely on less of the household income than in the communal type in Helwan and El Tebeen. Also cheaper construction materials are used in the individual extensions and there is a tendency to rely on self-built types which help to reduce costs.

d. In the communal multi-storey type of extension there is an underlying gain of power by the users. This gain of power is a result of the unity among the users in

the group. This unity, in turn, depends on the socio-economic and cultural homogeneity among users or at least for the majority of them. This allows then to practise some political pressure on the government through the political representatives in order to ease any threats against the existence of the extensions from the local authority's side.

e. There is a large stock of public housing where unused public space is available. The use of this public space is generally to increase habitable space of the dwelling by means of extensions; this seems to be quite a fair and reasonable approach, given the overall parameters of housing in Egypt.

The following are some positive and negative aspects which were found in the multi-storey extension process as in the Helwan and El Tebbeen cases:

Positive.

a. The extensions as a whole achieve a considerable increase in the dwelling area which in some case amounts to more than 100% of the initially provided area. The increase in the dwelling area is achieved depending entirely on the users own initiatives and by mobilising some of their resources in order to improve their housing conditions.

b. The multi-storey type of externsion is carried out through a social / economic organistation which consists of a group of users plus a builder or a contractor. The organisation of people is effectively the managing force

behind the mobilisation of resources and is a force which tackles the problems often arising during the implementation process.

c. The process of users extensions in the multi-storey type is carried out through a self-generating financial system. This system generates a degree of cash recycling within the same area because most of the contractors who partially finance the process originate from the same area re-invest part of their profits back into the same process as a means of generating business and opportunities for themselves and their labourers.

d. In the user transformation process as in Helwan and El Tebeen the commercial development of local shops and small trading establishments have established themselves in an informal pattern according to local demand throughout the project area. Such business activites directly relate to supporting income levels and employment of households and thus contribute to the economic develoment of the local population.

Negative.

a. No part of the financial resources is directed towards the upgrading of the overall environment, in terms of improvement to public infrastructure networks. Signs of the failure of the infrastructure to cope with the services overload already show in Helwan and El Tebeen housing projects.

b. Public open space in Helwan and El Tebeen remains the responsibility of the local authority . The public spaces are usually full of accumulated rubbish because of the lack of an effecient system of rubbish disposal and collection. The open public space between the blocks - as in the case of Helwan for example, is frequently used by the residents to dispose of domestic waste. It is only when nieghbours co-operate to clean up part of the public space, fence it in and turn it into a semi-private garden that it becomes looked after and well kept.

References.

El Messiri,S. (1989), **The Squatters' Perspective of Housing:An Egyptian View,** in Vliet,W (ed), Needs and Policy Trends in Thirteen Countries, Duke University Press, Durham.

Wikan,U. (1980), **Life among the Poor in Cairo,** Livistock Publications, USA.

# CHAPTER 5

## Case Study 2: Level 1 of the Investigation; The Tenth of Ramadan Core Housing Scheme

---

5.0 CASE STUDY TWO. The Tenth of Ramadan Core Housing Scheme: Level 1 of the Investigation.

5.1 Sites and Services - a case of control; the Users versus the Government.

5.2 Case Study Methodolgy.

5.3 Preliminary Case Study; The Division of responsibilities in aided-self help.

- 5.3.1 Tenth of Ramadan Core Housing Scheme TORCHS.
- 5.3.2 Helwan New Communities.
- 5.3.3 The distribution of responsibilities in the two projects.

5.4 Level One of the investigation; the project and its residents.

- 5.4.1 Level 1 procedures and analysis technique.
- 5.4.2 The initial provision.
- 5.4.3 The physical *transformation of TORCHS*.
- 5.4.4 The general socio-economic characteristics of TORCHS: Heads of Households.
- 5.4.5 The general socio-economic characteristics of TORCHS households.
- 5.4.6 The impact of security of tenure on household's decision making.

5.5 Summary.

## 5.0 CASE STUDY TWO. The Tenth of Ramadan Core Housing Scheme. Level 1 of the Investigation.

This chapter and chapters 6 and 7 deal with the Tenth of Ramadan Core Housing Scheme. Before presenting the Tenth of Ramadan Case Study the following section deals with Sites and services experiences in the developing countries, their limitations and potentialities.

### 5.1 Sites and Services; a case of control; the Users versus the Government.

It was not until the 1980's that enough evidence has been accumulated in order to evaluate sites and services as a form of low income housing provision in developing countries. (Peattie, 1982 and Ward,1984.)

Through the assessement of some of the experiences with sites and services limitations and questions started to appear. The seriousness of such limitations varied considerably from one case to another. Much of the criticism can be attributed to the general interpretation of what sites and services actually meant. In most cases it incorporated all sorts of packages, objectives, levels of involvement, designs and more importantly different political perspectives and conventions.

However the limitations and questions were clearly associated with what is sometimes referred to as orthodox sites and services approaches ( Ward, 1984.) Orthodox approaches conceive the meaning of sites and services as the building of houses in isolation from all the dynamics of the

surroundings. Two of the most contraversial aspects of sites and services are STANDARDS and STANDARDISATION. Both lie in the politico-design realm and are equally decided on by planners, architects, authorities and politicians.

Generally speaking sites and services tend to adopt ambitious standards in terms of services provision, planning and building regulations. In addition the authorities usually have unrealistic expectations as far as the rate and quality of housing development produced by the beneficiaries are concerned. Imposing high standards and ambitious expectations usually put the project affordability at risk.

More critically the desire to retain a formal image inhibits the residents from their own interpretation of building activities in the project and thus to transform it into a more resposive environment. The authorities formal image concept also inhibits the people's gradual process of consolidation and thus prevents them to integrate and identify with the environment.

Why do standards have to be imposed in the first place ?

"Will it matter for example, if circulation is blocked isolating one plot from another as a cluster ? Will it matter if some plots are combined and given to co-operative ownership as common land ? Will it matter if people rent, sell out or build with temporary materials or extend into public land or if initial (planned) densities are exceeded.....if it does not (and usually it does not) then it can be left to the free play of social and cultural conventions or even to market forces once the site is settled and self determined by indicidual households or self builders and special interest groups. In this case we might want to redesign or even dismantle legal frameworks that stand in the way." ( Hamdi, 1991, pp 97.)

Generally speaking standards are a measure which governments take to ensure that sites and services schemes will not turn into planned slums or the shabby look of informal settlements.

More importantly it is when governments accept to replace the concept of finished housing with sites and services and give up the anticipated prestigious gains of their product, they will want to stamp their mark and present an image of the State's concern for tidy, " healthy " and organised living conditions. The so called improvement which government housing suggests is demonstrated at its best in the high standrads of services, formalised and " modern " looking neighbourhoods in which their inhabitants behave in an urbanised " status quo " manner.

However in giving credit to governments and their motives one has to extend the debate about standards further to bring into the discussion the long term benefits of imposing high standards versus the anticipated immediate gains of lower standards.

As suggested by Rodell, if lower norms bring an immediate increase in standards might this have little effect on standards in the long run ? If not there is a case for retaining high standards and therefore in effect trading immediate but temporary improvements for higher standards eventually. ( Rodell, 1983, pp 47. )

Some norms which have a nature of permanence i.e they cannot be improved on in the immediate future, they have

to be considered carefully. These could be plot sizes and public space. Meanwhile infrastructures, building materials and all other upgradeable norms could be lowered at the outset and then later gradually improved. Critically the issue of norms and standards is a political question which is subject only to intense political debate.

The Sri Lankan governmant, for example, is one among few governments which have adopted a more wholesome and comprehensive attitude as far as standards are concerned. This is both in regard to settlement upgrading and sites and services projects. In the Sri Lankan case, in urban sites and services projects in particular, certain measures were imposed to rid projects of external influences which had given rise, among other things, to the loss of traditional know how and rigid plot size patterns and to induce local skills and traditional solutions into the housebuilding and settlement layouts.

The Community Building Guidlines represented codes of practise which whilst imposing certain standards concerning the development of projects, allowed a level of standards to be decided upon by the people in partnership with professionals, officials and community representatives. ( Dayaratne, R. 1992.) However as claimed by Dayaratne the community involvement in the making of decisions concerning the Building Guidelines did not deliver the desired full benefits of illuminating all the sources of mismatches between the people and the environment which was provided for

them. In his view this was due to stereotyped layouts for the new settlements which were all "officially" made. ( Dayaratne, 1991.)

Standardisation is usually a characteristic of sites and services schemes and even more critically in core housing projects. This is directly related to the achievement of administrative simplicity as well as to the idea of lowering project costs. However standardisation of plot sizes, public spaces and servies packages present an undeniable source of limitations to the householders freedom of choice and chance to act as and when they wish at prices they can afford. In contrast informal settlements offer a variety of housing investment options and methods of building houses according to their social and economic requirements.

Sites and services schemes tend to minimise the plot size in order to cut down the cost of infrastructure. This in turn eliminates the option of land as a reserved financial asset. For many poor households land is probably the most secure form of financial saving and insurance against the uncertainty of the future, an option which is readily available in the informal sector.

However in order to counteract the negative effects of standardisation some schemes tend to provide several options as in the case of the Arumbakkan project inMadras, where six options were made available to the beneficiaries for plot sizes. Each beneficiary had a different plot area ranging from 40 sq. metres to 223 sq metres as well as

different stages of completion for the initial provision.

The three smaller plot size categories had different provisions in terms of the core house as well as varying levels of on-plot service connections. The larger three categories did not have either a core house or on-plot services. Even so, it can be said that such approaches increase the danger of middle class intervention with the negative aspect of competing with the poorer households and eventually pushing them out. ( Rodell, 1983, pp 46. )

Recently some research proposals have started to point towards ways of avoiding pre-determined and rigid shelter provision. Among those, for example, is Hamdi's hypothetical scenario of how a settlement could be aided to develop in a way that would maximise its flexibility and adaptability in his " Making plans with Minimal Planning ". This is based on a series of expectations of land values and uses along with change in community needs. This in turn is modelled on how informal settlements actually develop in real life. ( Hamdi, 1991 pp 89. ).

Another example is that of Bhatt and Navarrete, where they had tried to recreate the development process of unplanned settlements on the basis of an adequate provision of infrastructure through a simulation exercise. The process was called " The Self Selection Process ". The users were allowed to select plots according to their individual preferences. There was no pre-determined plot size, shape or proportions. In each of the seven stages of infrastructure

and self-selection of plots, a consolidation process took place entirely on household and professional collaboration.

The simulation produced a design which appeared very different from conventionally planned settlements. According to the authors this had ".. indeed overcome most drawbacks inherent in conventionally planned projects. " (Bhatt and Navarrete.1991 ).

Sites and services are also characterised by an existing division of responsibilites concerning their organisational framework between the project authorities and the beneficiaries. A situation which begins with the allocation of allottees and continues for an extensive period of time. Frequently different parties mean different interests and different sets of priorities. More importantly the two sides in many cases do not share the same vocabulary or understanding of requirements which are a necessity for creating positive communication and action. These differences result in the breeding of dissatisfaction and contempt from both sides whereby conflicts and delays result in a failure to meet objectives and project standards. In the process there is no sense of community or community organisation and the households operate in isolation of eachother.

Without the recognition of these shortcomings and without an understanding of the requirements of the urban poor when evaluating sites and services and core housing schemes, an incomplete, inaccurate and unfair judgement is

often reached concerning the efforts, potentialities and above all the talents of the people involved in this sector of the low income housing process.

## 5.2 Case Study Methodology.

Case study 2 was designed to find out the criteria and limitations which affect the decision making process of users in aided self-help schemes.

Sites and services is a broad term which includes a wide range of types of provisions. Standardised initial provision could vary from plots with communal services to a core house consisting of an individual "wet" area and one habitable room. They also offer different combinations of financial, administrative and managerial packages for the running of such projects. For this reason a preliminary study was required in order to give insight into some of those differences and their impact on user's decisions.

Two projects with different systems of operation were looked at. These were the Helwan New Communites (HNC), Sites and Services and the Tenth of Ramadan Core Housing Scheme,( TORCHS ).

These two projects had different systems in which the way responsibilities were distributed between the beneficiaries and the local authorities.

The impact of these differences on the costs of

plot development, on user's affordability and on their social circumstances are some of the points dealt with in this investigation.

After the preliminary case study it became clear that the TORCHS Core Housing scheme provides a better opportunity to study the limitations and criteria affecting user's choices than the HNC sites and services scheme. This simply because the HNC's operating system is too prescribed, limited and controlled by the authorities that the users freedom of choice and self-determination are almost lost. The residents were reduced to government contracting agents carrying out the building of houses according to prescribed plan types and building materials. They had no powers to accommodate their own priorities or preferences of living patterns. The government had simply done their usual " rubber stamping " of a project in all its details and asked the intended population to build it for them. Perhaps with the passage of time when the users eventually start adding another floor or making an extension some degree of choice and self-determination will be incorporated into the project.

Concerning TORCHS and in order to answer different questions, different levels of investigation were conducted and different types of samples were selected .

Three levels of investigation were conducted in the TORCHS case study. Fig.5.1 illustrates the purposes of each level, the techniques and tools used to collect the required data as well as the samples, types and sizes.

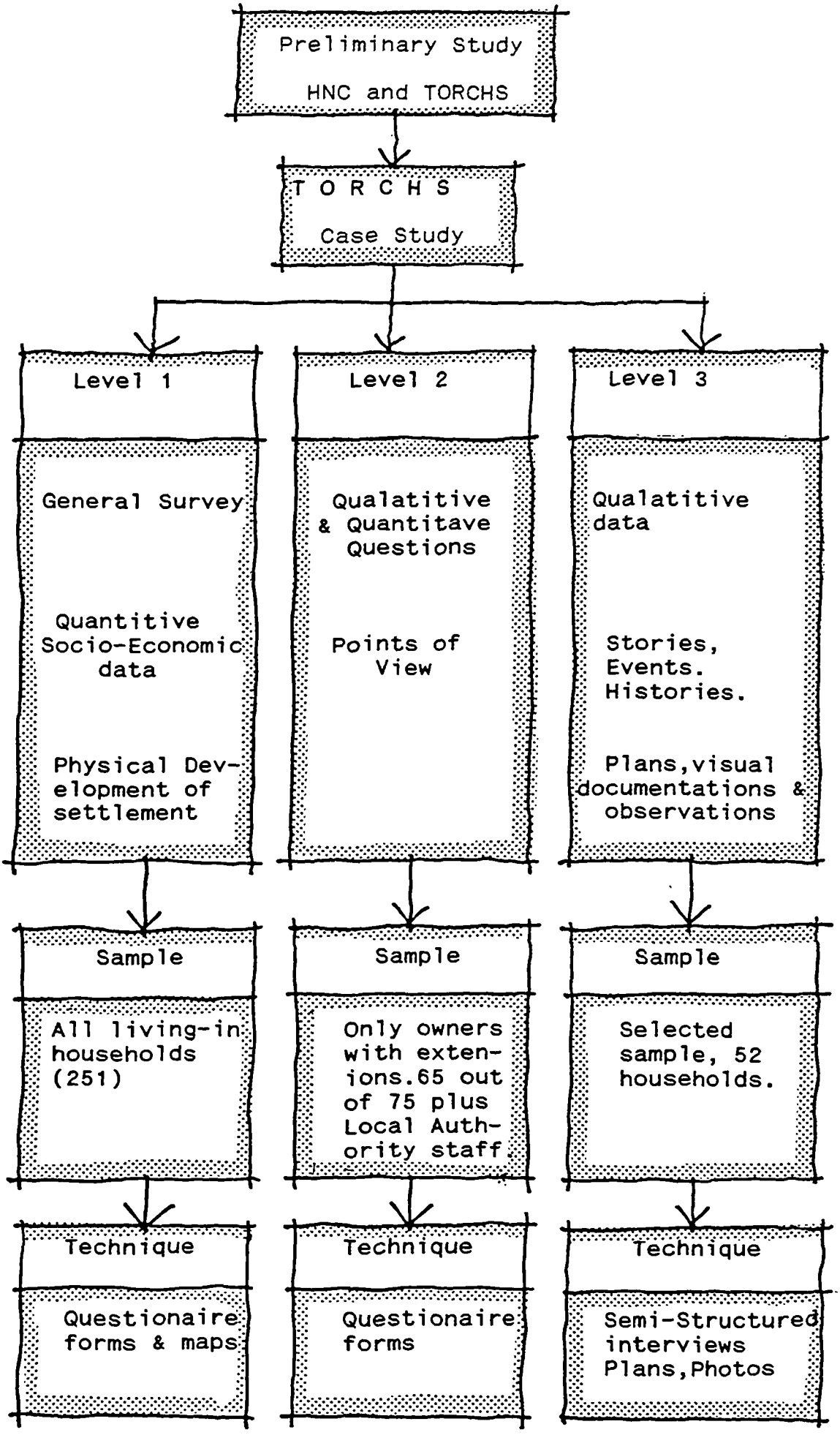



Figure 5.1 CASE STUDY 2. Methodology.

Level 1.

Level 1, of the investigation contains the general socio-economic data as well as the physical survey of the settlement and its development.The development of the settlement was recorded for all units in terms of type of construction, numbers of floors, number of added rooms as well as the tranformations introduced to public open spaces. The total number of inhabited units in TORCHS is 262 at the time of survey. The socio-economic survey covered 251 households.

For each dwelling only the data concerning the original household was included in the analysis. Lodgers or guests were not counted since the data concerning them could be innacurate and misleading firstly because they are not permanent residents and secondly because owners are reluctant to give information about areas could cause problems with the authorities.

The socio-economic data was gathered by a team of researchers at the National Centre for Social and Criminalogical Research in 1990 as a part of a research aaimed at investigating the demographic and urban characteristics of the 10th of Ramadan New City as a whole. The author was kindly allowed access to the basic data and the completed questionaire forms which in turn allowed the analysis of the data concerning the core housing scheme to take place seperately from other types of housing in the city.

Level 2.

In TORCHS there are three main types of tenure; 1. Owner occupiers, 2. Tenants and 3. Company residents.

In Level 2, only owner occupiers were interviewed. This was in order to eliminate the impact of the lack of security of tenure on the household level of satisfaction and consequently on the household's appreciation of the quality of the environment as well as on decision making criteria.

These were 65 owners out of a total of 75 owners. Specific questions were asked aiming at discovering how people understand quality. Before the owner interviews were conducted members of the Local Authority staff were asked about their points of view concerning the quality of environment which has resulted from the input of the users .

The aim of this level of investigation was to find out the differences and similarities in the users understanding of quality on the one hand and the authorities on the other. It has also revealed some of the users priorities may affect their decisions and hence the quality of the resulting environment.

Level 3.

Level 3, involved in-depth interviews with a selected sample of 52 households covering all types of tenure, types of plot, and different stages of house development. For this a semi-structured type of interview was applied. Detailed plans, observations and photographs were obtained for this level of the data collection. Thus the aim

here was to assert the findings of levels 1 and 2 as well as to add up all the factors affecting users decision making. The methodology, procedures and analysis techniques used in this level of the investigation resemble to a great extent those which were previously applied in Case Study 1 of this research.

In this Chapter only the preliminary and first level of investigation are presented. Levels 2 and 3 are presented in Chapters 6 and 7.

## 5.3 The Preliminary Case Study: The Division of Responsibilities in Aided Self-Help.

The recognition of the role played by the informal sector as an indispensible part of housing production in Egypt came in the mid-70's. This was primarily encouraged by foreign aid agencies with the governemnt acknowledging the large potentialities of the informal sector in helping solve the housing problems in Egypt if it were wisely managed.

Here the idea of self-help processes was first brought into the scene as a form of non-conventional form of housing provision. Meanwhile the introduction of this new thought coincided with the adoption of another important national strategy that of the New Cities Policy.

Since the mid-70's it became one of the strategic national policy aims to construct new city settlements in desert regions outside the Nile Valley.

The main aims behind this policy were to relieve the population pressure on the existing urban centres and to reduce the loss of agricultural land by encouraging development outside the traditionally and inhabited fertile strip of the Nile Valley.

The policy also aimed at enhancing the national economy by the development of an effective economic base in the proposed New City Settlements ( Ettouney and Abdel Kader, 1989 ).

Naturally with the planning of the first new settlement, the **Tenth of Ramadan New City**, the idea of sites and services was stressed by the Foreign Aid Agencies, who were heavily committed to a contribution to the New City developments in terms of finance and expertise. Several other sites and services schemes were also planned in many of the other new cities such as **Sadat City** as well as in the New Communites which were located closer to Cairo on the city peripheral limits such as **Helwan New Communities** and **Assuit Core Housing**. These new communities remained dependant for their economic base on Cairo.

However many of the new schemes did not develop further that design and proposals; others changed their objectives after one stage or the other and ended up as typical government public housing. The reason which is usually given to justify the shifting of policy is that the characteristics of user input into such schemes were not suitable for the loe income sector of Egyptian society. This scepticism was based on the view that the sites and services

approach would eventually, if not quickly lead to slums and poor housing conditions.

In order to avoid such an anticipated state of affairs and to maintain certain standards, some of those projects had operating structures which were tight and very prescribed to the extent of insisting on a singular and high level of standardisation for plot sizes, infrastructure provision, house plans and building materials. As in the case of Helwan New Communites (HNC) where the government became heavily involved in every stage of the project. As a consequence the expected benefits of self-help and self-determination were jeopardised and almost lost.

Meanwhile in cases where the government did not intervene in such a controlling manner as in the **Tenth of Ramadan Core Housing Scheme, (TORCHS)** the quality of the built environment and the houses was poor according to the authorities point of view.

This part of the study is devoted to understanding how alternative forms of organisation and distribution for design, finance, management and administration in self-help approaches, in particular site and service schemes and core housing might affect the user's decision making process and hence the quality of the housing and environmental results. In order to demonstrate this two projects were chosen which have already been referred to earlier namely:

1. The Tenth of Ramadan Core Housing Scheme (TORCHS)
2. Helwan New Communities (HNC).

## 5.3.1 TENTH OF RAMADAN CORE HOUSING SCHEME,TORCHS.

### 1. Project Background.

TORCHS was the first new city to be built in Egypt. The construction began in 1977 with a target population of 150,000 for the first phase (out of three phases). It is located about 50 km from Cairo, almost half way on the desert road to Ismailia. The city was planned with an industrial economic base which is mainly funded by private sector investment. Phase 1 of the New City where the core housing scheme (TORCHS) is located consists of 31 neighbourhoods. Fig 5.2 shows the 1st Phase.

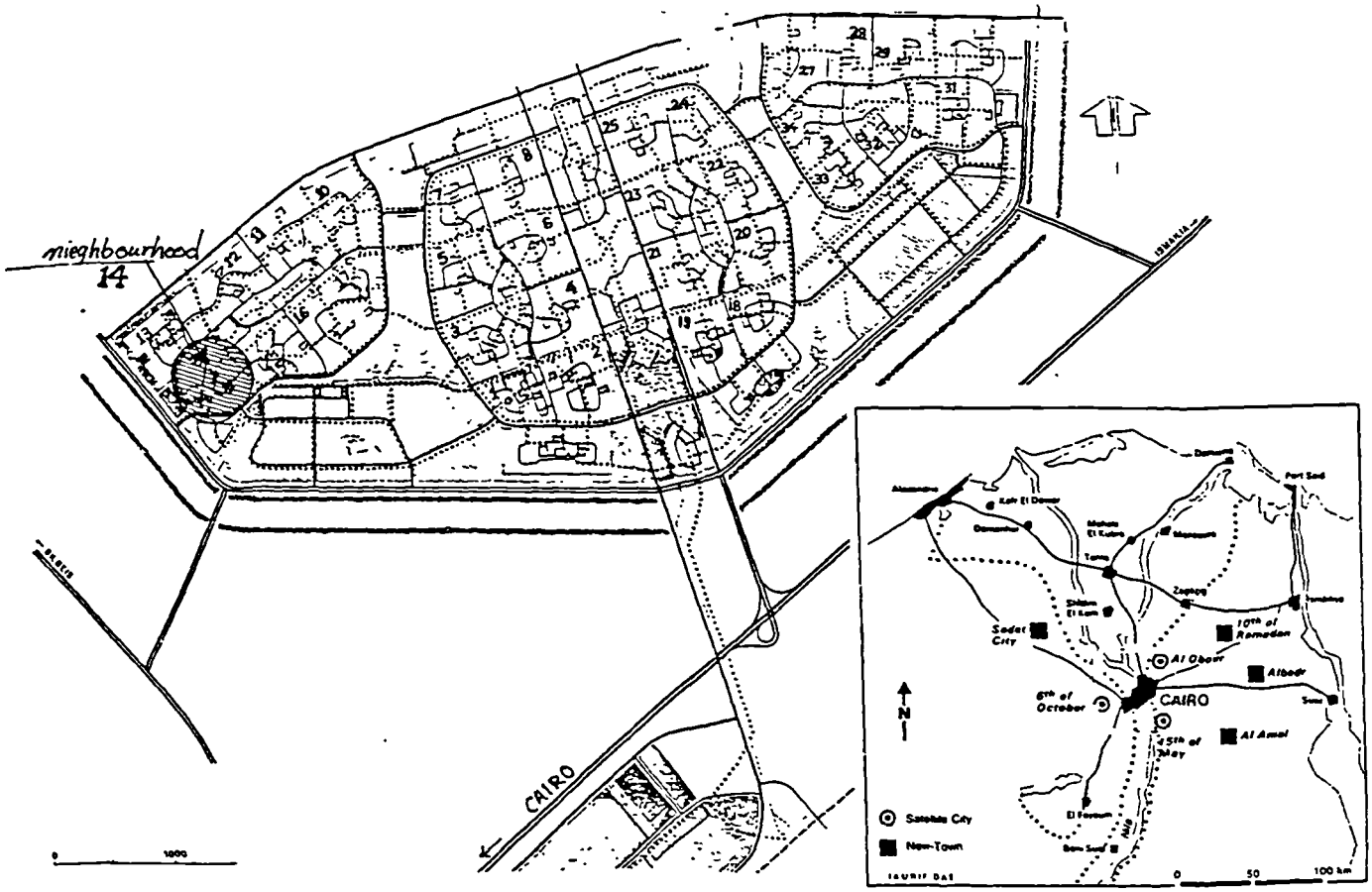



Fig 5.2 First Phase of Tenth of Ramadan New City.

Tenth of Ramadan was planned as a self-sufficient city in terms of housing, public services, community facilities as

well as job opportunities. Full standard individual services were provided.The planning of the city proposed that 60% of the housing should have been provided for the low-income groups.A great number of the low income units were supposed to be in the form of core housing consisting of a utiliy core and a room. Of this type of provision there were to be 7,584 core houses.Only 502 units were built in neighbourhood 14 and the scheme was cancelled fearing that it would lower new city standards as set by the ready made provision of government flats and plots for private sector development. The underlying fear in allowing the 7,584 core housing project to go ahead was the question of it affecting the new city image and thus discouraging private and foreign investment.

Today this meagre 502 unit core housing section in the Tenth of Ramadan is viewed by the authorities as the ultimate proof that core housing is equivalent to planned slums. Fig 5.3 shows the layout of TORCHS.

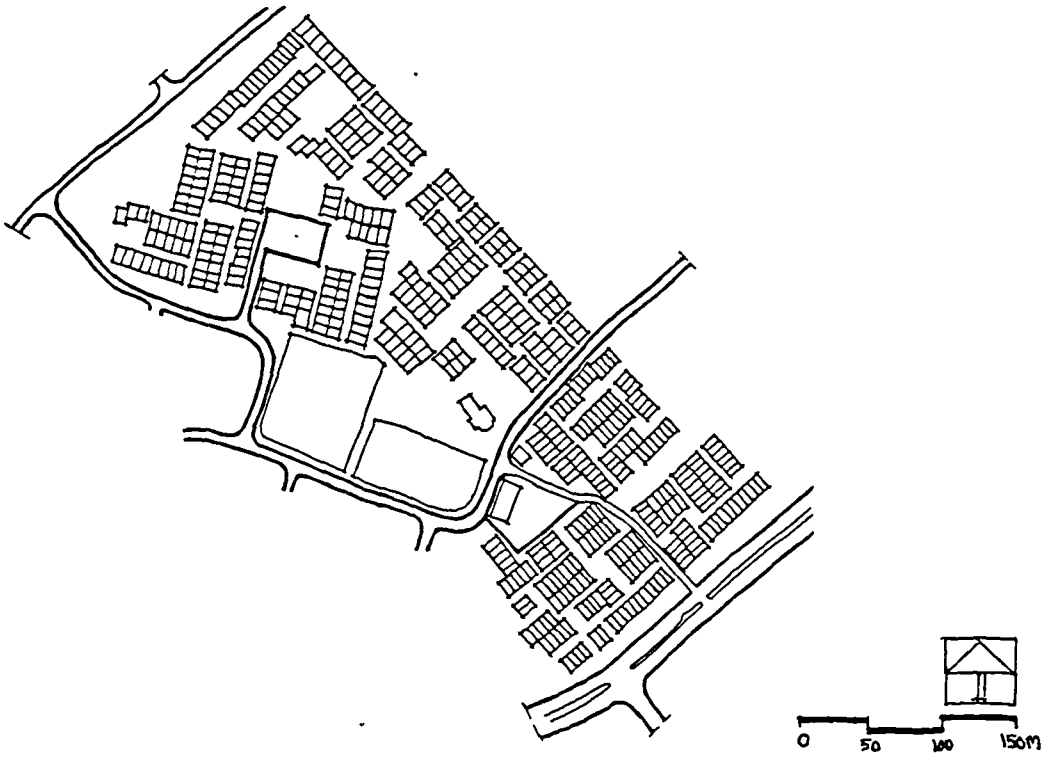



Fig 5.3 The Layout of TORCHS.

Picture 5.1 General view of TORCHS showing Core Housing and Government flats in the background.

Picture 5.2 Extended Core Houses.

## 2. TORCHS - a failure or success ?

The logic behind the choice of this project stems from the following criteria:

a.It is one of the very few schemes which has partially escaped the policy of abandoning self-help projects in favour of fully finished 4 or 5 storey walk-up flats or flats which are externally finished but internally completed only to the extent of plastered main structural walls and screeded floors.

b.Although the industrial development is is progressing more or less according to plan, the majority of the workers are still commuting to and from Cairo and other surrounding centres on a daily basis. Meanwhile the target population is still far behind the planned figures.

By 1986 already 193 factories were built providing 16,500 job opportunites (Etouney et al, 1989 ) and were already achieving the planned figures for factory re-location for the first phase. In 1990 the number of factories reaches 350 ( Fahmy N, 1990 ), whilst only 3,115 actuially settle in the city. A large number of housing units remained vacant. The overall occupancy rate of the city is 34.8% ( Fahmy N,1990).

This state of affairs is largely due to the inadequacy of the housing provided in terms of being affordable by the target groups and of the right size and type.

c.Whilst the serviced plots in the so called parcellation schemes have a very low rate of development, the core housing units have been largely occupied and extended by the inhabitants thus adding more habitable space to the city. This research estimates the addition of habitable space to be in the region of **12,000 sq.metres.**

In many neighbourhoods where serviced plots were sold to housing co-operatives or individual buyers not a single plot has been developed.These plots are obviously being held for the purpose of land speculation.

Meanwhile the majority of the inhabited core housing has been extended despite the lack of security of tenure and finance. The extensions were built without any government involvement, without any advice, technical support or assistance of any kind, in either the finance, design, construction or management aspects. The standard plans were distributed to 'beneficiaries' when paying for the unit but were rarely followed up. The benficiaries had to obtain their finance, procure building materials, organise the layout for the rooms to be built and then to execute the work with the help of a local contractor or hired labour or less frequently to carry out the work himself and with the help of the family.

The role of the local authority was confined to the issue of building permissions for the plan which they had issued and in the case of most households of imposing fines where the proposed building operation did not comply with

building regulations. The authorities role was therefore more of a policing role than of assisting or enabling the benficiaries to achieve their objectives.

Whilst neighbourhood 14 contains only 14% of the total finished units in the new city, in terms of units being occupied neighbourhood 14 represents around 70% and many of these are found in the core housing.This shows, on the one hand, a great popularity to living in the core housing and on the other hand,the vast number of owned but vacant flats in the remaining parts of the city.

In TORCHS different types and standards of house construction could be found reflecting various amounts of investement as well different times when such investment was made.

### 3. A Household Case Study.

The Ahmed household consists of 11 persons. He is a labourer in a company factory in the 10th Ramadan. The family originated from Shobra in Cairo where they owned a small house on 50 sq.metres of land.

When they left for the 10th of Ramadan in 1984 they rented out the house. In order to purchase the core house and the land they paid 1500 LE as a down payment and there are also repayments of LE 25 per month for 30 years. The total monthly income of this household is around LE 390 of which the father contributes LE 150, the son LE 90 and the son in law LE 150.

The initial provision consists of a room, wc, open kitchen and entrance situated along the front boundary of the plot. The area of the core house is 25 sq.metres whilst the total plot area is 90 sq.metres. The construction of the core house consists of load bearing brick walls with strip foundations covering the rest of the plot. The extension of the core house HAS to follow a predetermined plan and to be built by the owner himself. The plan designated by the local authority consists of three additional rooms to be added to the core house which open on to a narrow elongated yard. (see Fig 5.4 )

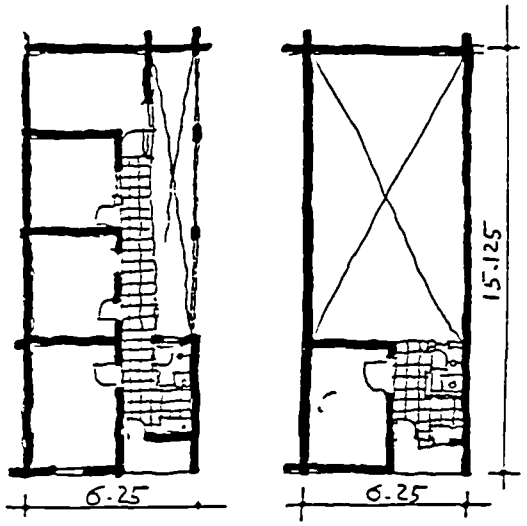



Fig 5.4 10th Ramadan Core House. Initial Provision and Type plan.

The actual house which was constructed in no way conformed to the intended version provided by the authourity and thus the foundation provision was of no use to the owner. Fig.5.5 below shows five additional rooms and one additional wc and an extra kitchen on the ground floor. This arrangement was made to accommodate a daughter who got married to a self employed building labourer. The couple originally tried to rent accommodation elsewhere in the 10th of Ramadan but found

rents too high for their income and thus ended up being taken in by her father who had built this arrangement from the original core to accommodate his daighter and son in law. It should be noted that this behaviour is acceptable in this socio-economic context. The extended core house suffers from problems of lack of daylight and ventilation.

The strength of the foundations under the initial core house were designed only for one storey thus over this part of the house a major structural risk is presented. The original foundations for the extension on the unbuild part of the plot,which were also only calculated to carry one storey, were torn up by the owner and new ones laid for the new plan and are designed to carry a second storey. The second floor, which is currently under construction, is divided into approximately two equal halves - one half for the daughter and son-in-law and the other half for his own wife and family. Being and end plot a garden was added along the side of the plot for growing vegetables as well as rearing chickens.(see Fig 5.5 ). The first floor is divided into two flats (unfinished) for Ahmed's two sons.

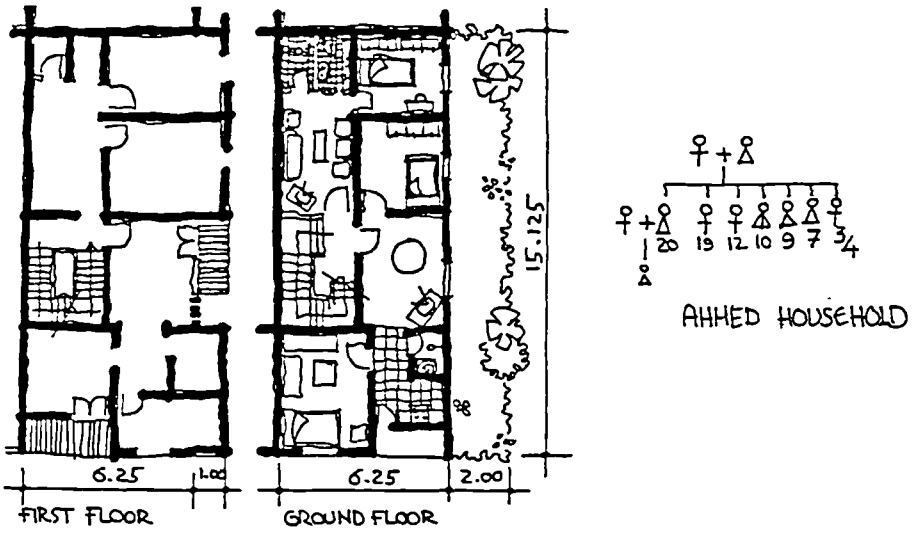



Fig 5.5 Ahmed's house, with five additional rooms.A part of the house accommodates his daughter and son-in-law.

The expansion of the house for both the ground and first floors was carried out by a small local contractor introduced to them by their neighbour. The ground floor cost LE 2500 which they paid to him in monthly instalements.

### 5.3.2 Helwan New Communities

#### 1. project background.

This development was originally conceived as a core housing scheme consisting of ten neighbourhoods aimed at the construction of 7000 units of accommodation. ( see Fig 5.6 )

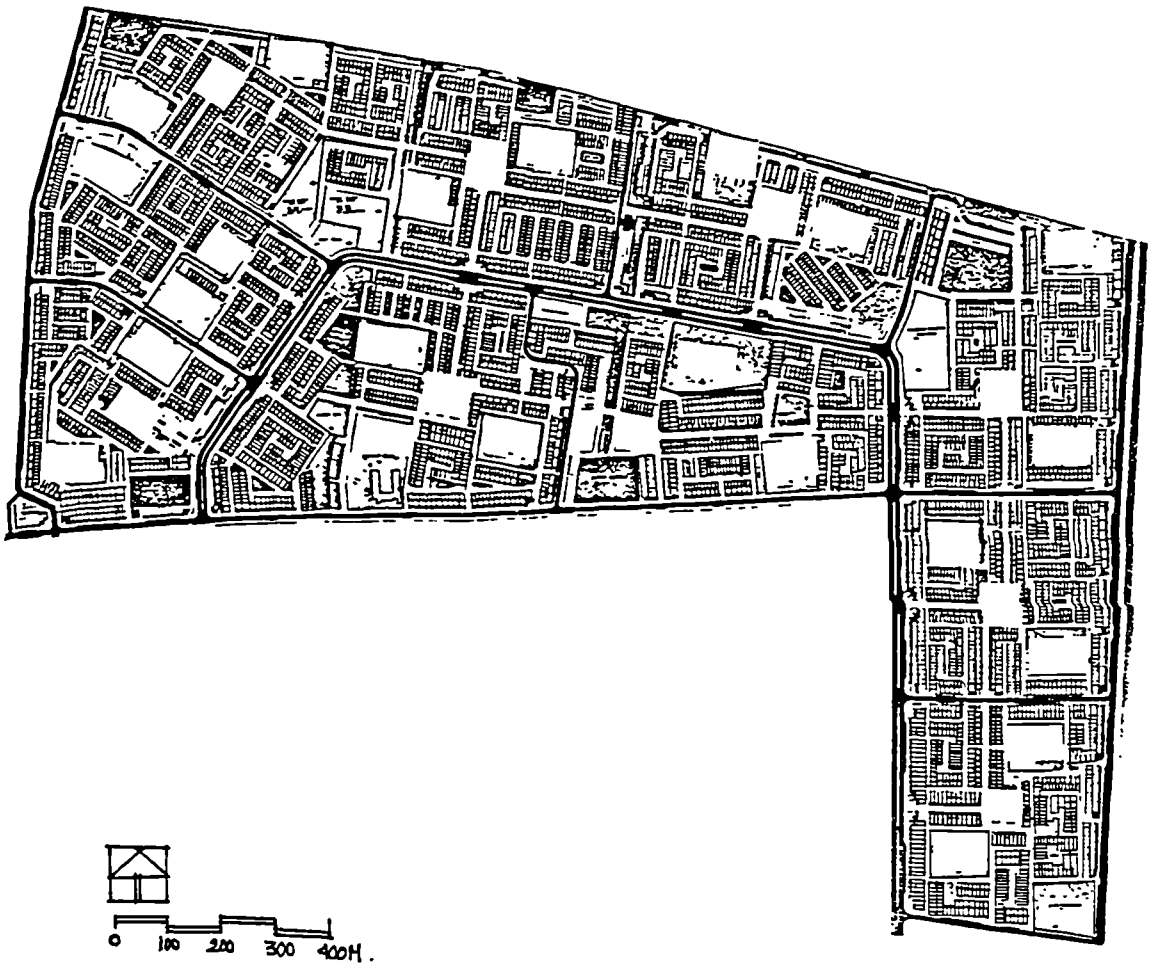



Fig 5.6 Helwan New Communities Layout.

The main part of the funding came fron the United States A.I.D Agency. The programme had an additional upgrading component to do with the surrounding informal settlement areas.

The original scheme ran into many difficulties and witnessed many policy changes. The Egyptian governemnt changed the entire concept and decided to construct subsidised 3 - 5 storey walk-up blocks of flats on 1200 of the original plots. This provided 4972 flats in 4 out of the 10 planned neighbourhoods. In the remaining neighbourhoods of which only 5 were finally designated, 1152 serviced plots were provided and were to be developed by household owners on a cooperative basis using appointed contractors to construct neighbourhood blocks.It is this part of the scheme which is the subject of investigation and the outcome will be compared to the Tenth of Ramadan Core Housing Scheme.

Complying with the Egyptian Governemnt's concern for the Helwan New Communities, the core housing approach was abandoned in favour of sites and services because of the fear by the Authorities that control would be impossible after the initial ground floor was completed. Hence it was thought that the core housing approach would lead to substandard communities.(A.I.D, 1990, pp 4 ).

U.S.A.I.D did not oppose this change of policy because it was thought that the idea of serviced plots which could be developed in a co-operative manner was a positive and a desirable form of project execution.

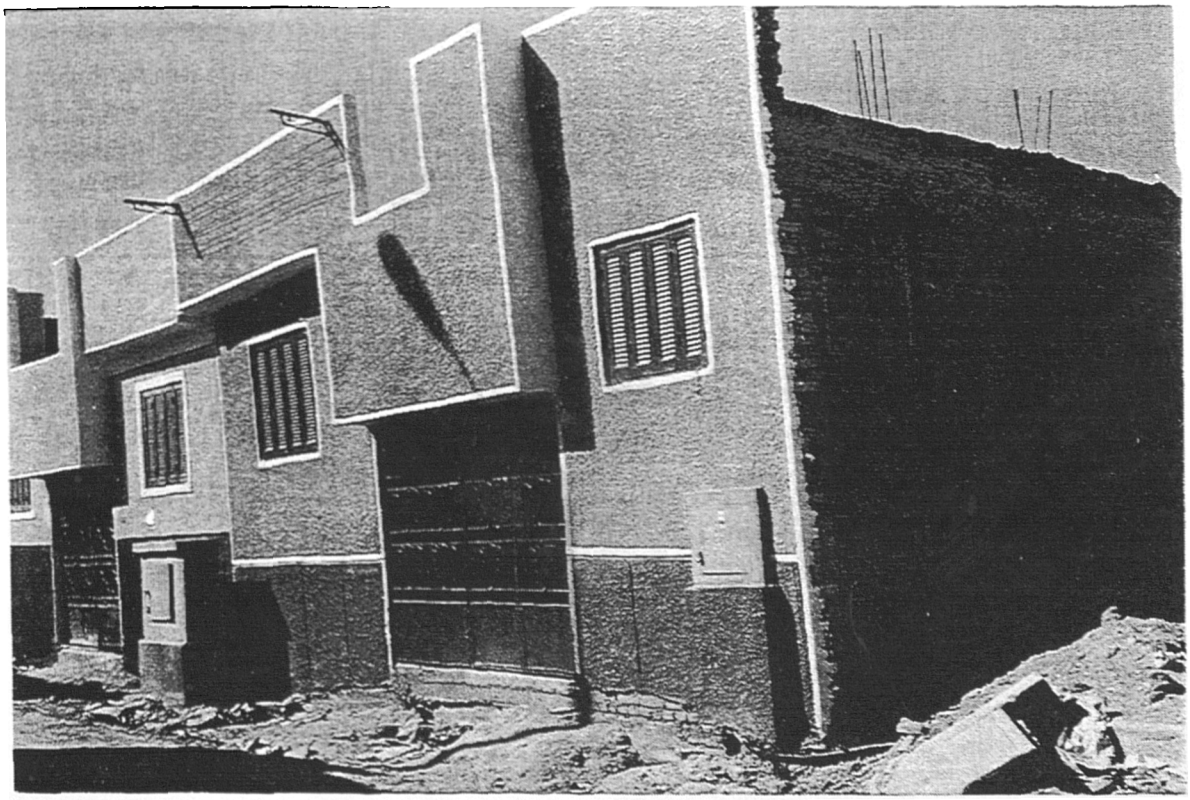
The concept adopted to develop plots was as follows. Blocks of approximately 30 plots were awarded to beneficiaries.The beneficiaries in turn then formed a building co-operative consisting of approximately 30 households. The project Development Agency ( EJAP ) had to approve the progress of the construction in stages in order to release the finance for the various stages of the ground floor. e.g soil tests, foundations, party walls, staircases,ground floor slab, and services . First and second floors could be added later according to user's affordability. In order to obtain a plot a downpayment of between 20% and 50% of the total price of the land was required. Loans for the construction of the ground floor ranged from LE 6000.00 to LE 8000.00 according to plot size . The loans, in installements, were distributed later to the contractor when the ground floor construction was started. A prescribed floor plan had to be followed in all its details.

The repayment of the loan both for the remaining part of the land and for the construction loan was over a 30 year period with a simple interest of 7% .

## 2. Helwan New Communities (HNC) - A failure or a success ?

It is clear that such an operating system was not directly in favour of the beneficiaries and was designed mainly to maintain and maximize the involvement of the Local Authority throughout the project. According to a study conducted by U.S.A.I.D in 1990 and based on a sample of 30 beneficiaries the affordability picture was and still is not very promising and would remain so until 1984.

Picture 5.3 A typical street in Helwan New Community.



Picture 5.4 A typical house in Helwan New Community.

As shown in Table 5.1 it was found that very few of the households even meet the liberal criterion of 30% of the totalsalary being spent on housing (U.S.A.I.D, 1990 pp 20 ).

| Affordability Criteria % of total salary on housing % | % of Cases at affordable levels % | % of cases at unafforable levels % |
|---|---|---|
| 20 | 13 | 87 |
| 25 | 21 | 79 |
| 30 | 37 | 63 |

Table 5.1: Affordability of plots based on 1989 total salary. (Source U.S.A.I.D, 1990,pp20 )

Table 5.2 shows that if the current rate of increase of salary (as bweteen 1989 - 1990 ) could be maintained untill the year 1984 under the criterion of 30% of total salary being spent on housing about 21% of beneficiaries will still not be able to afford the project costs.

| Affordability Criteria % of total salary on housing | % of cases at affordable levels | % of cases at unaffordable levels |
|---|---|---|
| 20 | 45 | 55 |
| 25 | 68 | 82 |
| 30 | 79 | 21 |

Table 5.2: 1994 Affordability of plots with current per annu rate of increase of salary maintain for each worker. ( Source U.S.A.I.D, 1990, PP21)

The fact that a middle sized contractor was imposed on the benficiaries for the construction of the project did not only mean that they were unnessesarily overcharged for the work but more importantly that the amount of the loan was insufficient to finish the ground floor which was the contracted stage to be carries out. Many beneficiaries were forced to find additional resources which put further pressure on their already tight financial circumstances.

It also resulted in delays which were caused by the frequent disagreements between the contractor and the beneficiaries which in many cases ended up as legal court cases and disputes.

Delays in construction meant delays in the repayment of loan which in turn led to further accumulation of interest rates.

From the Helwan New Communities experience it is obvious that the involvement of the authorities in the developemnt of the project, in order to control project standards, caused a considerable escalation of costs. Beneficiaries experiencing financial hardships were left with two options, one of making further sacrifice which they could barely afford or the second of writing letters of complaint to the authorities which until now has proved to be of no avail.

### 3. A household Case Study.

The family of Saleh consists of 6 members. Saleh is a worker in one of the public factories in Helwan. He originated from one of the Delta villages. They lived for 13

years in one of the informal settlements with his cousin in a shared flat. They bought the land in Helwan New Communities in 1988 after going through a selection procedure based on income criteria and housing need. The land was aquired by making a down payment of 700 LE. He received a LE 6000 loan in stages to construct the ground floor only consisting of three rooms, kitchen and bathroom ( see fig 5.7 ).

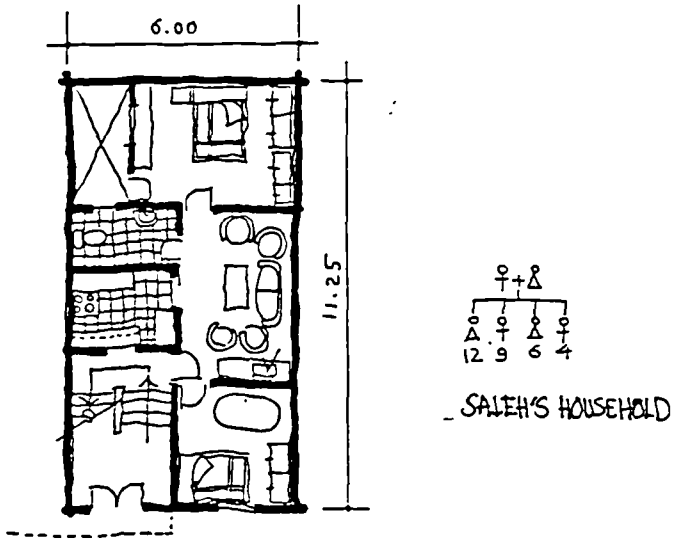



Fig 5.7 Saleh's house

According to the rules set by the project organisers the 33 households forming a block of 33 plots had to set up a co-operative employing a contractor from the formal sector who had to have a minimum initial capital of LE 250,000. This contractor could then carry out the construction of the ground floor which covered the whole plot. Each block had to appoint a foreman or representative to dealing with the financial arrangements and various decision making requirements in connection with the contractors constructional duties.

According to Saleh the construction of the ground floor had actually cost him more than LE 10,000 to finish, which exceeds the amount of the loan by LE 4000. This additional amount has been raised by obtaining loans from within the family and through the selling of jewellry.

Saleh and his wife had many complaints about having to work with a group of 33 households and secondly having to have a middle contractor who effectively was forced upon them by the authorities and who in Saleh's view overcharged them considerably. The family also had some complaints about the design of the floorplan, which was also forced on them by the authorities.The type plan,in Saleh's case,did not meet with his requirements since it had no balcony (unheard of in Egypt) and the distribution of space for the living room and bedroom was not in the right proportions for the stage of his family development. He needed a larger bedroom which could have been acheived by trading off space with the living room. He applied formally to do this but the application was refused.

The most serious of all the problems concerned the repayment of the LE 6000 loan which was to start in November 1990. The repayment was to be LE 60 a month which represented more than 46% of the total household income.

### 5.3.3 The distribution of responsibilities in the two projects.

The chart shown in figure 5.8 describes the distribution of the responsibilities concerning who does what i.e the different parties (listed vertically) involved in carrying out the basic tasks of the project.

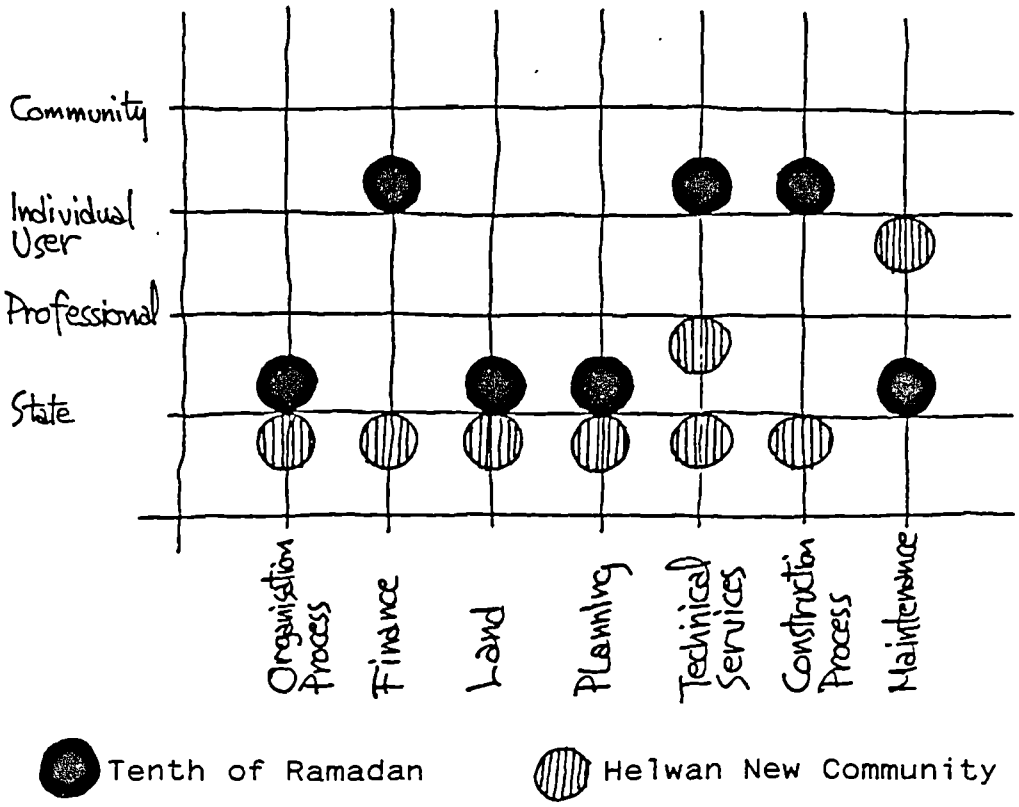



Fig 5.8 Division of Responsibilities.

The organisation process, planning and land aquisition procedures in both projects was entirely carried out by the Local Authority and the Professionals. This led to problems such as ( in Helwan) abandoning the orginal design because of the users refusal to accept communal access to the units. In the 10th of Ramadan the initial design was completely ignored and even the original core house was sometimes demolished to make way for an entirely new construction matching the requirements of the extended family type.

For the aquisition of technical services and carrying out the construction, in the case of the 10th of Ramadan these services had to be aquired by the individual user and was his responsibility In the Helwan project these aspects were totally organised by the Local Authority using formal contracting procedures and services.

In both cases the resulting qualities and built forms were quite different. In Helwan N.C the rigid financial, management and construction processes which were applied led to uniform results and great financial burdens whilst in the 10th of Ramadan the more flexible process has led to a more variable and adaptive environment reflecting a rich social and cultural mix which is not the case in Helwan New Communities.

In both projects there was no straightforward plan to deal with the aspect of maintainance. In Helwan New Communities it would appear that the inhabitants managed to ordganise their own maintainance in so far that they contracted a private firm to collect garbage. In the 10th of Ramadan this aspect was supposed to be the Local Authorities responsibility but signs of failure were everywhere.

In self help projects a lot of value is lost when rigid and proscriptive rules are enforced in order to maintain certain formal standards. Economic hardship and social mismatches arise.

However when less rigid and more prescriptive rules are used economic and social choices become available leading to a more socially and economically supportive environments.

Nevertheless the main issue remains of how to achieve the right balance of inputs for user and government initiatives without leading to an overcontrolled environment on the one hand or the creation of a slum on the other.

At this point, **The Tenth of Ramadan Core Housing Scheme** was selected to form a detailed case study in which the aim was to understand the factors affecting users choice concerning the way people build their extensions to core housing units.As mentioned before a government built unit was provided consisting of a wc/wash area, kitchen and one samll room varying between 18 to 25 m.sq. with a free plot area varying between 55 to 95 m.sq. for extensions. Some of the questions here relate to why some households choose to build using reinforced concrete skeleton construction whilst other use load bearing brick or block walls or why do some complete with finishes to external walls whilst other do not. Further questions concern the effort of households to build up the whole plot area leaving little or no space for ventilation or outside space.

Understanding the limitations which constrain the choice of user's action or distort them is an essential pre-requisite to the understanding of the process of users decision making. The aims of this study could be summarised as the understanding of user's priorities and how the limitations which they face affect their perceptions of quality and choice. Furthermore it concerns the question of how far do local authorities and users agree or disagree about their respective perceptions of quality.

## 5.4 Level One of the Investigation.The Project and the Users.

As previously mentioned this case study involves three levels of investigation which in turn have required different types of samples to be taken and different methods of data collection which in turn result in different techniques of analysis of the data.

In this chapter only Level 1 is dealt with. Levels two and three are dealt with in chapters six and seven respectively.

The remaing part of this chapter consists of level one. It aims at providing a general picture of TORCHS dealing with the project and the people who live there.

Level one is an attempt to answer questions concerning what has actually been achieved in terms of physical development and transformation of the project. It also provides a general picture of the socio-economic background to the residents of TORCHS.

The facts presented also try to shed some light on the question of quality. Thus the outcome tries to find out why certain choices have been made by certain users at different points in time. Two main factors which are thought to have a great influence on users decision making are the security of tenure and the users own understanding and perception of quality. These two factors are discussed in more detail in the following chapters.

### 5.4.1 Level 1. Procedures and analysis techniques.

Level 1 has involved a general socio-economic survey of all the households living in TORCHS. It also involved a general physical development survey of the core housing units in order to record the general extent of the transformation of the existing situation by the users in the TORCHS

The socio-economic as well as the physical development data of TORCHS and its households were analysed using SPSS statistical package.

Simple statistics such as averages, percentages and frequencies of occurance were usually sufficient enough for giving the overall picture of TORCHS and its households.

As often as possible the averages and distribution of frequencies of TORCHS data were compared to corresponding data of the households of the Tenth of Ramadan City as a whole. This comparison was thought to be useful in showing how the TORCHS experience fitted into the wider context of the New City as a whole. The averages and frequencies of the Tenth of Ramadan City were obtained from a report prepared by a team of researchers from the Centre of Social and Criminalogical Research in Cairo ( Fahmy,1990 ).

The questionaire form used for this data can be found in Appendix 4. Regression analysis was also used here in dealing with the impact of the security of tenure on user's decision making activities in the project.

### 5.4.2 The Initial Provision.

The Tenth of Ramadan Core Housing scheme is located in Neighbourhood 14 in the industrial area of the second district in the first phase of the New City.

In addition to the 502 core houses in Neighbourhood 14, there are also 966 two-roomed flats in walk-up blocks. The blocks are located on the peripheral areas surrounding the core housing settlement. (Fig 5.9)

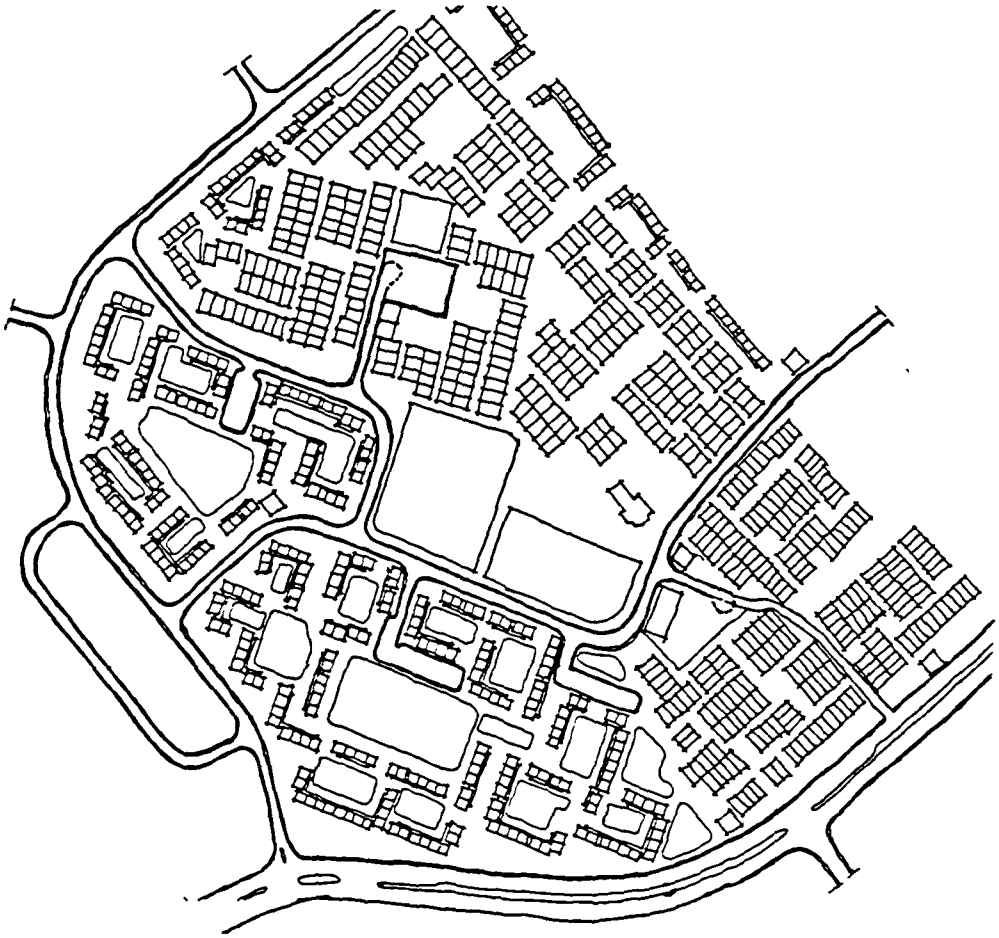


Fig 5.9 Neighbourhood 14

The service centre of the neighbourhood is located in the middle of the core housing settlement. It is worth noting that the walk-up blocks of flats do not reflect any changes in design or construction from the public housing built in Egypt since the 1960's and are very similar to the Helwan Economic housing referred to in the first part of this study.

The 10th of Ramadan flats are finished completely. Today they are much more expensive than their earlier counterparts due to the element of cost recovery which was absent in the earlier provision of the 60's. These ready made flats are today managed in a different way in so far as they are built for sale rather than rent. However the loans which are involved for low income earners to purchase the flats are made at subsidized rates.

In the layout of TORCHS it does not seem that there was any clear planning concept behind the arrangement of plots and public spaces. Both the plots within the blocks and the blocks within the street layout do not adhere to any regular pattern and consequently present a neighbourhood lacking in shape and any characteristic form.

The TORCHS layout has a very low ratio of private to public land area. The private areas consist of plots whilst the public areas include open spaces and streets. There is only 35% of the layout area devoted to private uses.

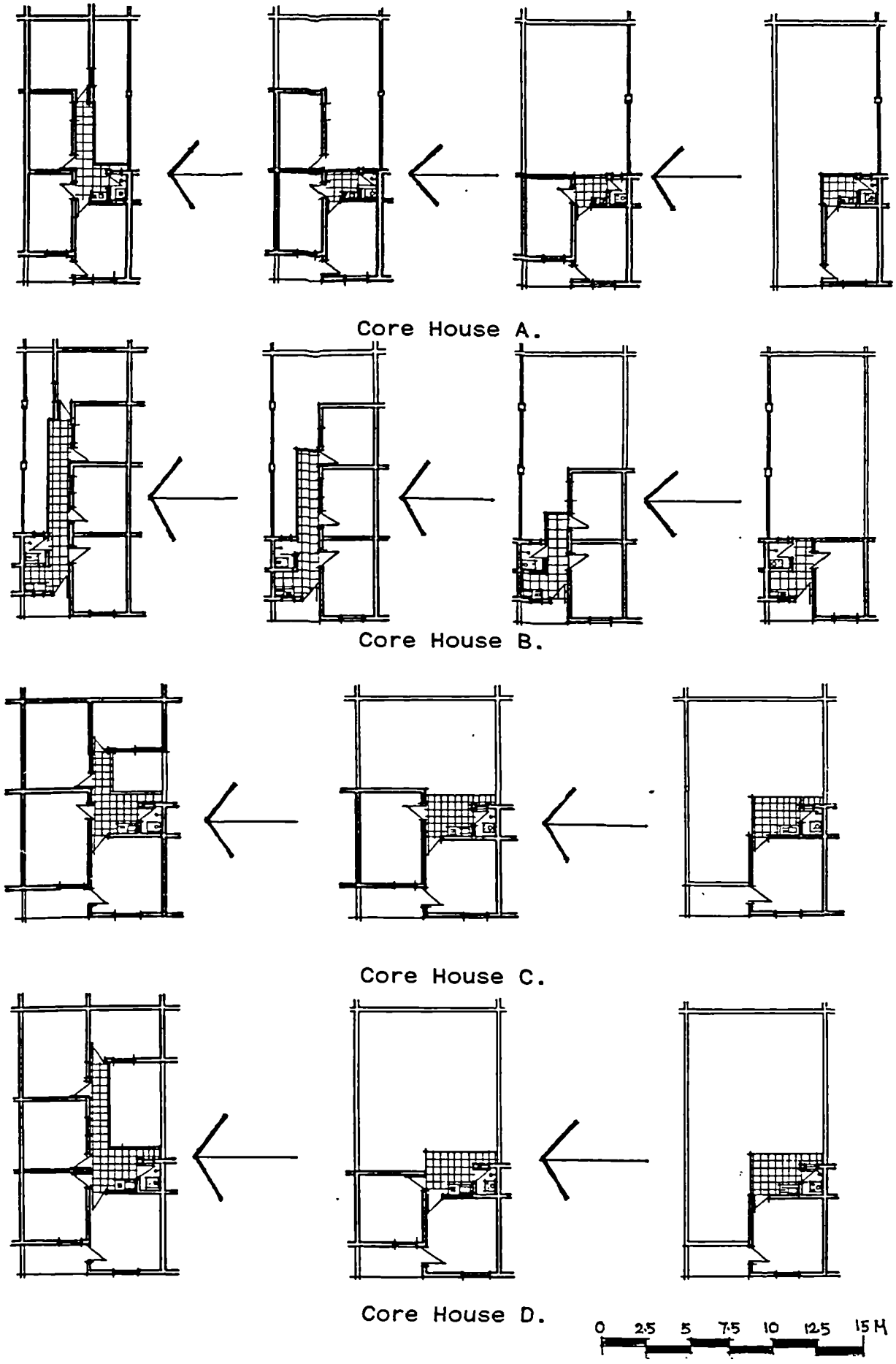
There are many odd block shapes which result in varying numbers of plots with one, two and up to three

facades open to public space and access roads. Some plots have one free facade whilst a considerable number have two free facades.These are plots which are either in a "terraced" form with a back and a front whilst the others are those at corner situations with the depth and frontage facing the street.

This in turn has resulted in varying degrees of physical constraints concerning access to the house and to the ventilation aspects of the extension made. These consequences of the neighbourhood and plot layout will be discussed later. Open space between the blocks is mainly linear however there was an attempt to create some concentric spaces. Yet these would appear to be by accident rather than design as they do not occur according to any logic or sequence. The pedestrian access roads range from 6 to 15 metres in width without any clear reasons for variation.

The street system could be described as main road penetrating the settlement with two cul-de-sacs surrounded by a parking space. However this system was dramatically changed by the local residents and will be described in a further section later on. The centre of the neighbourhood is located at the middle of the main road. The centre includes a mosque, a primary school and a commercial centre.

There are four types of core house in TORCHS. Figs 5.10 a, b, c and d, illustrate those types. The plot areas and the corresponding areas of the built-up core unit for each plot are respectively in sq. metres 90a, 90b, 96, 120 and 18, 23, 24.6a and 24.6b




Figs 5.9a, b, c and d. Different Core House Types.

The core house is always located at the front of the plot. The rest of the plot is walled with 150cm high surrounding brick wall.

The core units are built of load bearing brick walls with a concrete roof. Surface foundations for the future extensions are provided in pre-determined positions.

The core house elements consist of a habitable room an access door, a bathroom and an area reserved for a kitchenette. These are the same for the three plot types A, C and D. Only plot B has a different arrangement in which access to the plot is through a central lobby. In plots A, C and D the main access to the plot is through the front room. This in turn gives access to the bathroom and kitchenette area as well as to the rest of the unbuilt plot area.

The kitchenette area is neither roofed or walled. A kitchen sink is the only provision in this area and is open to the sky .

In the case of plot type B the main access to the plot is through a central lobby in which the bathroom / kitchenette areas are accessible through this area. The central lobby is not roofed initially but can be covered easily by any sort of temporary building materials without erecting any additional walls. However in plot types A, C and D roofing the open kitchenette and lobby area which gives access to the bathroom requires a vertical wall construction element.

### 5.4.3 The physical transformation of TORCHS.

TORCHS has been physically developed by its users into an environment which is different from the planned concept in many ways.

1. The Core Houses.

It was found that out of 502 core houses there were 204 which remained unextended, and about two thirds of these remain unoccupied.

The initial prototype plans were continuosly ignored by the users. Also in terms of the permissable number of floors which have been built the activity here exceeds the permissable limits. At the outset of the project all the core houses were meant to be developed into a ground floor storey only with no additional first or second floor. After some negotiations with the authorities the regulation were changed to allow the construction of an additional first floor. It was found that among the 298 extended core houses there were 260 houses with only a ground floor; less than half of them have already started a first floor extension; 33 houses have a ground and a first floor and five houses have a ground, first and second floor.

At present it is against the regulation to build a second floor. Some users were actually forced to demolish the second floor extension but it seems that others have escaped the law.


Fig.5.11 Number of floors in TORCHS.

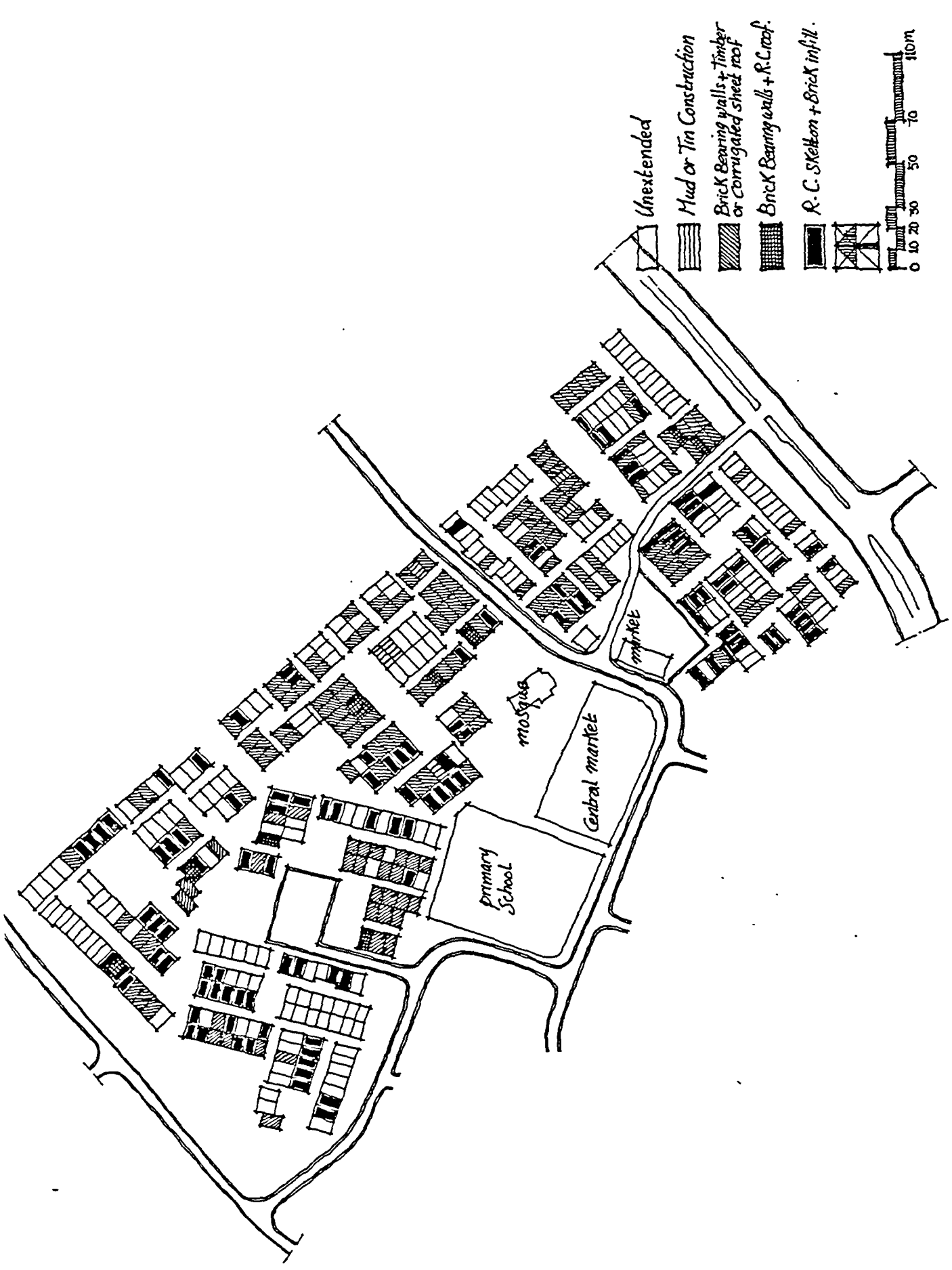



Fig 5.12 Different Building Materials & Construction Types.

Fig 5.11 shows the number of floors per house in TORCHS. TORCHS users were expected to build their extension using load-bearing brick walls and reinforced concrete roofs . In TORCHS at present there is a mixture of different building materials and construction techniques. Sometimes even within the same house one can find different construction techniques and materials. Whilst a few houses can be found using mud construction methods, it was found that about 52% of the extended core houses were built using load-bearing brick walls and timber or corrugated sheet roofing. Also about 42% of the houses were built using a reinforced concrete skeleton frame and infill brick walls. The use of a concrete frame indicates the user's intention to build more than one floor. Fig 5.12 shows the different building materials and construction techniques per house / plot.

The best way to appreciate TORCHS users' accomplishments is in terms of the habitable space they have managed to add to the city. 202 households have built about 350 rooms relying on their own resources. There are 22 informal shops scattered around the settlement and run by the users representing a much needed service to the community of TORCHS as well as to the nearby neighbourhoods. (Fig 5.13)

2. The Open Spaces.

Frequently the users have transformed parts of the public open spaces surrounding the core houses into private gardens. The gardens are usually very well looked after and maintained in contrast to the public open spaces of the roads and squares which are left unattended and not at all

maintained. Piles of rubbish and waste are allowed to accumulate in certain areas especially around the skips which have been left by the children who have been sent out to dispose of the rubbish but who were ubable to place it in the skip because of the height of the skip being beyond their reach, see picture 5.5 The area around empty houses are also used as tips by some of the residents.

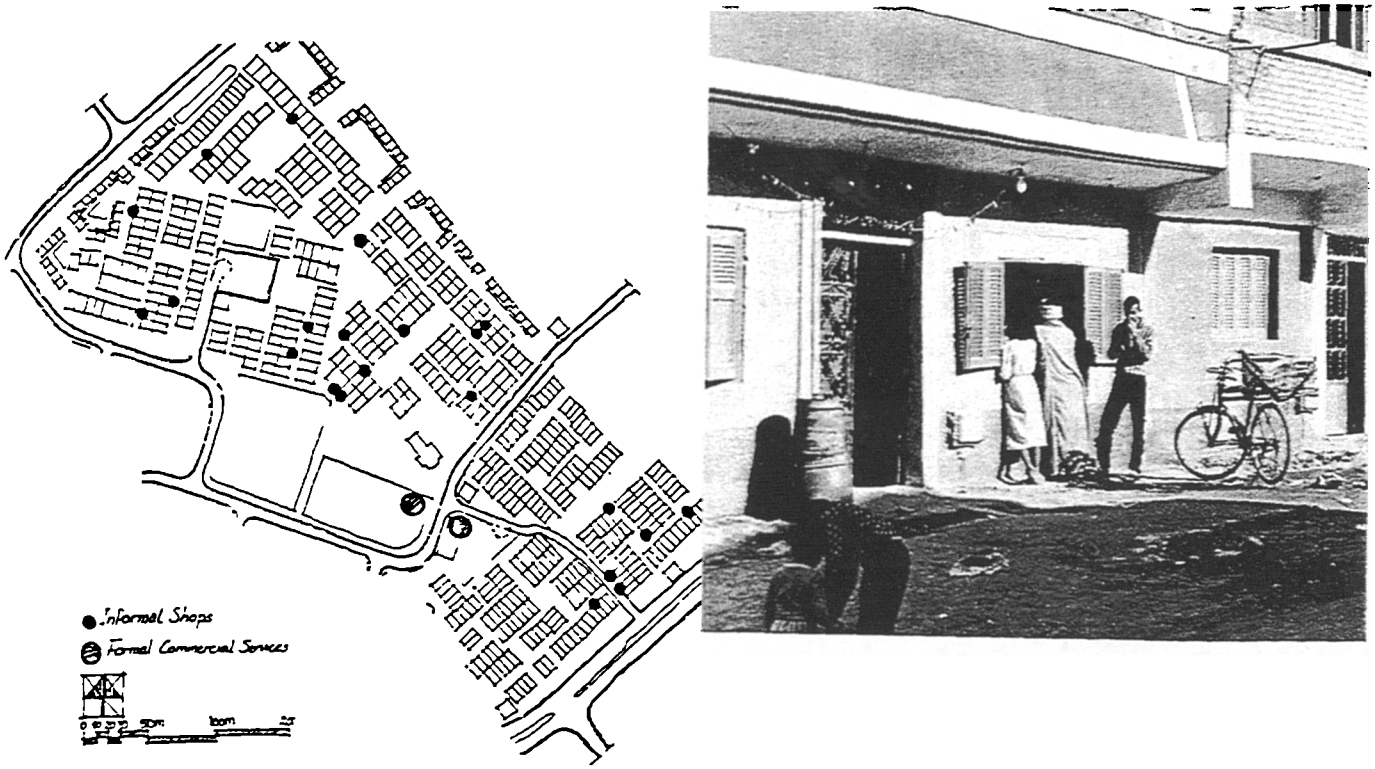



Fig 5.13 Pattern of Informal shops in TORCHS.

Picture 5.5 Rubbish skip.

Another aspect of the way in which residents have manipulated public space is the road system which is shown in Figures 5.14 a and b. Here, according to the official plan the main access to the settlement was a road running from the east side of the settlement to the north west. This road did not connect to the main feeder highway ( Fig 14.a) which forms the southern boundary to the settlement and is the shortest route to the settlement arriving to the Tenth of Ramadan. Initially taxis and private small mini-buses began made an informal connection between the feeder road and the settlement. Originally unsurfaced it quickly became the most direct way into the settlement and now benefits from a hard tarmac surface eventually granted nand built by the authorities. At the junction of the two roads there is now an informal bus stop and a flourishing business of people selling tea and refreshments.

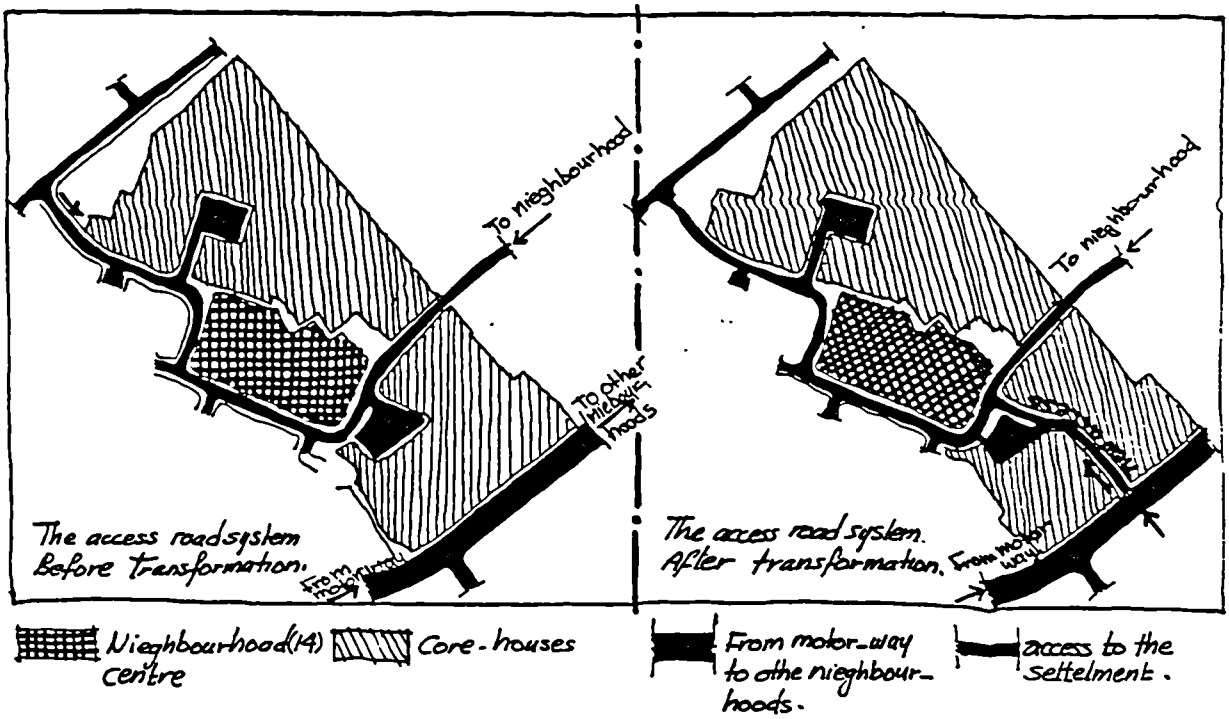



Fig 5.14 a

Fig 5.14 b

### 5.4.4 Heads of Households - General Socio-Economic Characteristics.

#### a. Age and Sex.

The Tenth of Ramadan is a New City some 12 years old and therefore it is quite expected that it has a large number of newly formed household heads among its residents. It is also anticipated that a considerable number among the household heads would be young in the 25 -40 year old category i.e men and women at the beginning of their earning years. The population of all the new cities in Egypt are generally speaking composed of this age group.

The average age in TORCHS for the heads of housholds is 36.6 years whilst for the City as a whole it is 34.6 years. This small difference between the two averages is understandable because TORCHS is one of the oldest neighbourhoods in the city.

Only 4 heads of households were found to be females in TORCHS. All of them are widows and were more tham 40 years old.

#### b. Origin.

About two thirds of TORCHS heads of households came from urban centres. Almost half of them came from Cairo alone. The rest came from urban centres from the different governorates. "El Sharkkia" which is the nearest rural governorate to the Tenth of Ramadan has the second highest contribution concerning the heads of households origin.

c. Employment.

Generally speaking Neighbourhood 14, where TORCHS is located, is a working class neighbourhood. Neighbourhood 13 is also a working class neighbourhood but who are housed in walk-up flats and Neighbourhoods 5 and 6 are occupied by owners from the business and company sectors of employment.

In TORCHS about 55% of the heads of households were found to be workers employed by privately owned companies. Also about 25% are workers employed by a single public/private company,ARAB. This company is one of the investment establishments of the Arab Contractors Company, Osman Ahmed Osman.

The ARAB workers represented the largest group of households working in the same firm living in TORCHS. They also lived grouped in a section of the settlement. About 17% of TORCHS heads of households are governmental employess. These are either working in the Tenth of Ramadan Development Agency or in the services sectors e.g as school teachers, policemen etc. Finally there are only 2.2% self employed heads of households the majority of which depend on informal activites for their income.The rest have their own small family businesses in transport and trading affairs.

d. Income.

The majority of TORCHS heads of households are workers ( about 80% of the total ). The low average income is quite understandable. The average monthly income for the head of household in TORCHS is E.L 132.8. The average monthly income for household heads in the Tenth of Ramadan City as a

whole is E.L 180.20. Therefore TORCHS heads of households earn E.L50.00 per month less on average which is not an inconsiderable sum of money. For the low to middle income households the lowest head of household income in TORCHS was found to be about E.L 50.00 per month whilst the highest was E.L 400.00. Only about 11% of TORCHS heads of households earn more than E.L 100.00 per month.However the economic situation of TORCHS households should not be assessed before acknowledging firstly the income of other earners in the household and secondly the income generated from informal activities. This will be investigated in chapter seven. The foregoing deals only with the heads of households and formal sector earnings.

### 5.4.5 The General Socio-Economic Characteristics of TORCHS households.

#### a. Existing Types of Tenure.

In TORCHS there are 262 occupied core houses out of 502 which were built. The majority of the core houses have been allocated to beneficiaries. Only 24 have not yet been allocated. Every householder among the 251 included in the general survey sample enjoys one of the three existing types of tenure. These types are 1. owner occupiers. 2. tenants and 3. company residents.

1. Owner Occupiers.

The owner occupiers have a freehold lease. The ownership is obtained by firstly paying a downpayment ranging from E.L 500.00 to 800.00. After the downpayment

installements are required on a monthly basis of between E.L 25.00 to 28.00 over a period of thirty years. The interest rate on the 30 year loan is 3%

2. Tenants.

The tenant category is split into three different types. The first is a tenant who has a legal rent contract of unfurnished residential accommodation. In most cases the tenant would actually have owner status since once all installements have been paid to the government the house ownership will be legal.

The second type of tenant are those households who have a furnished residential unit rent contract. These type of tenants are not allowed to introduce and major or permanent construction works to the core units.

The third type of tenant are usually different individuals or group of people e.g. unmarried men, each renting out a room in a household of an existing owner. In some cases a furnished-room rent contract is issued. Generally speaking within this group rent would be directly collected by the owner without any form of contract.

3. Company Residents.

The third type are households who live in a core house provided by the owner of the company or firm which employs the head of the household. In this case the core house would belong to the company. The workers would be allowed to live in the unit as long as they are employed by the company.

Once they loose their their job they loose the house too. This, therefore, is housing directly tied to employment. The company residents are not offered any form of rent contract and their job is their guarantee of a house. In a few cases the company might have built an extra room to the inital core house but the majority of households were given unextended core houses. There are a few cases where the core houses are inhabited by a group of single male workers who work for the same company and who do not pay any rent. This group was not included in the survey sample as they would distort the overall picture for the following reasons:

- The total household income would be far above the average household income because all the household members are earners.

- Their earnings are not spent on core house extensions or any improvement to the house or their living conditions. This group are equivalent to guest workers sending most of their earnings back home to invest in their home village or town. They usually are willing to accept minimal living standards in order to save and send money home.

**b. Household type and size.**

The majority of TORCHS households are nuclear families. Only 21 among the 251 sample households were found to be extended families. Seven among them have a son or daughter married and living in the same house. 15 households have

living-in relatives. Those relatives could be brother or unmarried sisters. In other cases they could be one parent or more of the husband or wife.

The average household size is 4.9. This average although still slightly below the Egyptian avarage of 5.0 is still larger than the average of the Tenth of Ramadan New City as a whole which is 4.3. (Fahmy,1990,pp159.)

Table 5.3 shows the distribution of TORCHS households according to the household size and the corresponding distribution for the Tenth of Ramadan City.

| Household Size | % of TORCHS households | % of Tenth of Ramadan households. * |
|---|---|---|
| 1 | 4.0 | 4.3 |
| 2 | 9.2 | 11.8 |
| 3 | 10.8 | 18.3 |
| 4 | 18.7 | 23.4 |
| 5 | 19.5 | 19.6 |
| 6 | 15.9 | 11.2 |
| 7 | 14.3 | 6.8 |
| 8 or more | 7.6 | 4.6 |
| Total % | 100.00 | 100.00 |

* Source for Tenth of Ramadan City data only is Fahmy,1990,pp159.

Table 5.3 TORCHS and Tenth of Ramadan household distributions according to household size.

Reading from table 5.3 TORCHS share of the large households of 6 members or more is about 37.8% while the Tenth of Ramadan City's share is only 22.6% . Meanwhile the smaller households of 4 members or less accounts for 42.7% in TORCHS as opposed to to 57.8% in the Tenth of Ramadan. The percentage of 5 members in households in both cases is the same. It therefore appears that TORCHS has more households of a larger size than in the rest of the city.

c. Duration of Stay.

The average duration of stay in the Tenth of Ramadan New City as a whole is 5 years (Fahmy,1990,pp 140). If one considers that the implementation of the city started in 1978 and the survey which this average is based on was conducted in 1990 such averages seem quite reasonable.

However it should be stressed here that the Tenth of Ramadan New City, as well as most of the other New Cities has large numbers of finished housing units which have already been allocated to beneficiaries but have remained empty for many years - sometimes for more than ten years.

The same situation applies to the serviced parcellations of land schemes which have been allocated to housing co-operatives and middle class individuals but were never developed. Hence this avarage of 5 years should be viewed against this context of very low occupancy rates. The average for TORCHS households is 5.3 years. About 64% of the finished housing in the city is still empty.

d. Education.

A high illiteracy rate was found to be prevailing among TORCHS heads of households and their wifes. About 37% of TORCHS heads of households are illiterates. Also 30% can on read and write. That means that they have not received any formal schooling but they can manage limited reading and writing. 10% of the heads of households have finished basic school, 21% have some sort of middle education and 2% have had a higher education.

TORCHS illiteracy rate seems to be the highest in the Tenth of Ramadan City as a whole where the illiteracy rate is as low as 13%

e. Income and number of earners.

Table 5.4 shows the distribution of TORCHS households according to their monthly income. It also shows the corresponding percentages for the Tenth of Ramadan City.

From Table 5.4 it can be calculated that there are 77.3% of TORCHS households with a monthly income of less than EL 200.00. The corresponding percentage for the Tenth of Ramadan is 62.9%

The average household income in TORCHS is LE 158 per month. For the City as awhole this reaches up to EL 192 per month (Fahmy,1990,pp 168). The difference between the two averages amounts to LE 34.00 per month . In terms of monthly earnings this is a considerable sum of money.

| Household income Income EL month | % of TORCHS households | % of Tenth of Ramadan City households. * |
|---|---|---|
| less than 100 | 17.8 | 20.8 |
| 100-199 | 59.5 | 42.1 |
| 200-299 | 13.4 | 21.0 |
| 300-399 | 5.7 | 8.8 |
| 400-499 | 2.4 | 4.1 |
| 500 and more | 1.2 | 3.2 |
| Total | 100.00 | 100.00 |

Table 5.4 TORCHS and the Tenth of Ramadan Household Distribution according to monthly income.

* Source for Tenth of Ramadan data is Fahmy, 1990 pp 169.

TORCHS therefore does not only have a relatively low average income for heads of households but it also has a low average for the total household income. However it is an important fact to note that the difference between TORCHS and the Tenth of Ramadan City averages of heads of household income and those of the total household income has dropped from EL 50.00 to EL34.00 per month. This means that the other earners contribution to the household income in TORCHS is higher than in the case of the Tenth of Ramadan.

This situation is rather surprising as only 18% of TORCHS households have more than one earner. However although

there are only 3,115 households living in the city as awhole there are 4,386 earners among those households. So there are many households with more than one earner. The relatively high "other earners" contribution to the household income in TORCHS could be due to the fact that few among TORCHS "other earners" are women and women were found to be earning less than the men on average in the City as a whole. (Fahmy,1990,p97).

The percentage of the working women in the Tenth of Ramadan City as a whole is 11.5% compared to only 7% for TORCHS. In TORCHS many of the other earners are male relatives such as brothers of the husband or the wife who could be easily accommodated in the multi room core houses than in the one or two bedroom flats in the other neighbourhoods. Also many of TORCHS households who have more than one earner actually have two, three and in some cases four earners within the same household.

### 5.4.6 The Impact of Security of Tenure on User Decision Making.

Security of tenure has always been considered as an essential factor for the realisation of development of any project where user's inputs are required. Nevertheless in the case of the Tenth of Ramadan Core Housing Scheme the security of tenure was not granted for all households. This seems to be the direct result of the lack of belief in self-help as an unconventional form of housing provision both from the local authorites side as well as the genral lack of experience with such approaches in Egypt at the time.

Most of the units, except those sold to some local authority employees, were sold to business owners. The business owners were in turn expected to distribute them among their employees.

Suprisingly the majority of households who do not have secure tenure still extended their core housing units. Out of the 133 households who do not have secure tenure 93 households have built extensions to their (core) units in one form or another.So it seems the lack of security of tenure did not deter the majority users from building extensions.

However the way the extensions were built by the residents without rent contracts were quite different to those of the majority of the extensions built by owners or those with legal contracts. Understandably the amount of investment put into the extensions by those with lack of security of tenure is considerably lower than those who have ownership status.

Table 5.5 shows the composition of TORCHS householders in terms of the type of tenure and for each type of tenure it shows the number of extended and unextended units.

It is obvious why the majority of company residents have built their extensions using cheap construction materials as much as possible and often of a very temporary type. However among the 75 owner occupiers 38% have done just the same. The number of added rooms in the case of the

| Type of tenure | No.of extended units | No. of unextended units | Total |
|---|---|---|---|
| Owner occupier | 75 | 5 | 80 |
| Tenant | 24 | 14 | 38 |
| Company resident | 93 | 40 | 133 |
| TOTAL | 202 | 49 | 251 |

Table 5.5 Composition of TORCHS households according to type of tenure.

company employees rarely exceeded one or two rooms with average of 1.00 whilst in the case of the owner occupiers the average reached 2.50 rooms and in some cases the added number of rooms has reached 11.

Nevertheless 36% among the owners added only one or two rooms. The number of rooms added by the 202 households who have extended their core house totalled 350 rooms.

This raises questions such as how do economic factors such as household income, number of earners or social factors such as household size affect the decision to plan and construct extensions.

TORCHS offers a good opportunity for studying the impact of security of tenure on users decision making and therefore on the resulting quality of the extensions they

have built. The following comparison is made in order to investigate this impact.

Whilst acknowledging the main socio-economic characteristics of the user, the size and type of extensions are being compared in the cases of two different types of tenure. These are the ownership and company resident types. It was decided to exclude the third type ( tenancy ) from the comparison because there were doubts in many of the cases regarding the actual ( or real ) status the householder actually had. i.e whether the householder was actually an owner who had obtained the house from an original owner who had not paid off his loan or whether the house was still legally a third party's house. This situation arises because of the illegality in the transference of ownership when loan have not been paid off.

The question which this comparison attempts to answer is how far do some of the socio-economic factors influence user's decision making in each of the two types of tenure, ownership and company resident and how far can one rely on such factors in explaining user's decisions in each of the two types of tenure.

a. Procedures

Four main socio-economic characteristics were selected to describe household characteristics:.lm5

1. The household total income
2. The household size.
3. The age of the eldest child
4. The duration of stay ·

These factors were selected because they were considered the ones that should have the most direct effect on the decision concerning the extension of the core house. The reason why the age of the eldest child was selected instead of the age of the head of the household or his wife was because it was considered to express more directly the need for additional rooms.

The number of additional rooms represent the number of rooms built by the householder regardless of the type of construction.

The size of the investment expresses the number of added rooms and the type of construction. The size of investment is a dummy variable which was achieved through multiplying the number of rooms by a figure substituting the type of construction ( an ordinal scale variable ). For example, the skeleton concrete structure with brick infill walls was given the highest score whilst an extension built out of temporary material such as recycled tin was given the lowest.

As mentioned before Multiple Regression Analysis (1) was selected as a statistical technique to test the relation between the number of added rooms and the size of investment ( dependent variables ) and the four socio-economic variables, household total income, household size, the age of the eldest child and the duration of stay, the independent variables.

---

(1) Multiple Regression is a method of analysing the collective and separate contributions of two or more independent variables, (xj) to the variation of a dependent variable (y). (Kerlinger and Pedhazur, 1973, pp:3).

Firstly only the three first independent variables were entered into the analysis and secondly the fourth ( duration of stay ) was added later on. The results of the Regression Analysis is given in Tables 5.6 and 5.6b.

Tables 5.6a and 5.6b show the regression results where Rz is the regression residual, F is the F ratio and T is the partial regression coefficient; also the corresponding significance values are given for the F ratio and the T tests (2).

The variance in the dependent variables which are the size of investment and number of added rooms was tested firstly in Table 5.6a against the three independant variables - the total household income, the household size and the age of the eldest child. In Table 5.6b the duration of stay was added to the independent variables.

In both tables the regression was repeated two times. At first all the company residents were included in the sample population. The second time all the owners were included. Appendix 7 contains the eight graphs showing the relationships between the averages of the independent variables against the dependent variables.

---

(2) R2; often is called the Coefficient of Determination, because it indicates the proportion of variance that the regression equation accounts for. In other words, it tells how much of the variance in the dependent factor is accounted for by the independent variables. F ratio; indicates whether the regression is statistically significant or not and at what level of confidence.T test; are tests of the partial regression coefficient. They indicate the slope of the regression of the dependent variable on the certain indepenent variables after controlling the other independent variables. (Kerlinger and Pedhazur, 1973 pp,34, 38 and 69 ).

| TENURE TYPE | DEPENDENT = SIZE OF INVESTMENT | | | | DEPENDENT = NO OF ROOMS ADDED | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | R2 | F sig | T | SIG | R2 | F sig | T | SIG | |
| | % | | | | % | | | | * |
| All Company residents | 38 | 25.5 | 2.89 | .004 | 53 | 46.0 | 1.71 | .090 | (1) |
| | | .000 | 6.30 | .000 | | .000 | 9.25 | .000 | (2) |
| N = 133 | | | -0.72 | .471 | | | -1.30 | .166 | (3) |
| | % | | | | % | | | | |
| All owners | 9 | 2.6 | 2.52 | .014 | 12 | 3.4 | 2.69 | .000 | (1) |
| N = 80 | | .059 | 1.09 | .277 | | .024 | 0.87 | .385 | (2) |
| | | | -0.23 | .816 | | | 0.39 | .701 | (3) |

Table 5.6a. Regression Results. * The three independent variables; in the order of entry are:(1) household total income,(2) household size, (3) age of eldest child.

| TENURE TYPE | DEPENDENT = SIZE OF INVESTMENT | | | | DEPENDENT = NO OF ROOMS ADDED | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | R2 | F sig | T | SIG | R2 | F sig | T | SIG | |
| | % | | | | % | | | | * |
| All Company residents | 35 | 11.5 | 3.49 | .001 | 52 | 23.6 | 1.58 | .118 | (1) |
| | | .000 | 4.77 | .000 | | .000 | 8.29 | .000 | (2) |
| N = 133 | | | -.63 | .531 | | | -1.30 | .210 | (3) |
| | | | 2.11 | .038 | | | .06 | .953 | (4) |
| | % | | | | % | | | | |
| All owners | 19 | 4.2 | 1.66 | .101 | 19 | 4.1 | 1.93 | .058 | (1) |
| N = 80 | | .004 | 1.50 | .138 | | .005 | 1.20 | .235 | (2) |
| | | | 0.89 | .374 | | | 1.31 | .196 | (3) |
| | | | -2.90 | .006 | | | -2.40 | .019 | (4) |

Table 5.6.b Regression Results. * The Four Independent variables; in order of entry are:(1) household total income,(2)household size, (3) age of eldest child,and (4) duration of stay.

b. Findings:

Based on Tables 5.6.a and 5.6.b one can indicate some significant points:

- In both Tables R2 was found to be considerable higher in the case of the company residents than in the owners. For example in Table 5.6a, R2 for these two categories, when the dependent variable was the size of investment, was found to be respectively 38% and 9% The corresponding F ratios were 25.5% and 2.6% which are significant at the levels of 0.000 and 0.059.

Similarly when the dependent variable was the number of added rooms, the R2 values for the two categories were respectively 53% and 12% The corresponding F ratios were 46.0 and 3.40% and these are significant at the levels of 0.000 and 0.024.

This indicates that in the case of company residents the variance in the three independent variables (household income, household size and age of eldest child) together explain a great deal of the variance in the dependent variables. Hence the three independent variables play together a very significant role in influencing user decision making concerning the number of rooms as well as the size of investment put into the extensions.

Although these three variables are not completely insignificant in influencing the change in the dependent variables in the case of the owners but they play a considerably smaller role than in the case of the company

residents. Similar conclusions could be established from Table 5.6b.

- Looking at the more detailed relationships between the individual four independent variables and each of the two dependent variables from Table 5.6 a and b, one could make some interesting remarks. In the case of the company residents, the household size seems to be the most significant variable in influencing the change in both the number of added rooms and the size of investment. (respectively the T values are 9.27 and 6.48 which are both significant at .000 level) The household income follows the household size in its significance. Clearly this relation indicates that the larger the household size the more the number of added rooms is, and the more amount of investment will be used in the extension. The same applies to the household income, i.e the higher the income the more rooms are built.

Meanwhile in the case of owners only the first variable, (household income), on its own is significant enough in influencing the dependent variables. On the other hand the duration of stay seems to play a relatively significant role in this case. But suprisingly enough it has a negative correlation with the dependent variable. This could be interpreted as - the shorter the length of stay which the household has had in TORCHS the more number of rooms they add and the more investment they put into the extension. The only possible explanation for such a relationship is that the new arrivals of owners have a higher

income than the older owners. This might imply either a a process of transference of ownership to more capable households or that the newcomers who are better off and now more encouraged to settle in TORCHS than before; this could be a positive point on behalf of the TORCHS community and the quality of life offered to its residents.

- Finally the possible explanation of the first finding and which is the most important one is that because owners have secure tenure they are more free to choose when and how to build their extension. They do not have to act always to satisfy their immediate needs. They could in fact be building an extension to answer future needs i.e. extending the core house for their future needs of their children when they get married say in five or ten years time hence.

However the company residents are extending the one roomed core house because they, by necessity, require basic accommodation such as providing separate sleeping space for the children reaching adolescence. So one could predict the behaviour of this category and not the owner category i.e the former is forced to follow a certain set of decisions whilst the latter is not.

Consequently, in terms of the quality of what is built by the owners has a very variable physical quality from one case to another whilst most of the company residents have similar qualities in terms of what is physically built.

Also owners are more likely to have poorly ventilated internal spaces whilst the company residents would be likely to have a poorer construction quality.

However the freedom of choice and action in the owners case does produce a mixture of materials and styles. Logically speaking and purely from a soci-economic point of view this should not have been of any consequence or cause for concern to the policy makers or to the local authority.

However in the political context this is a matter of concern. The Tenth of Ramadan is an homogenous, systematic, standardised and institutionalised city. Standardised in time, dimension and constructional philosophy, TORCHS does not fit in with this image.

Also the low standard of the extension construction is clearly a minus point from the local authority's point of view.

To conclude; the secure ownership produces a low consistency in the use of materials but of a relatively high constructional standard whilst the insecure tenurship produces material homogenutiy but lower constructional standards.

These points lead to the investigation of what represents poor and good quality in the eyes of the two main parties, the users and the local authority. This is discussed in Chapter six.

## 5.5 SUMMARY.

From all the discussions and investigations carried out in this chapter the following conclusion can be made.

1. The pattern of distribution of responsibilities have a major impact on the quality of the built environment in Aided Self-Help Schemes.

It became clear from the way the 10th of Ramadan Core Housing and Helwan New Communities project both have developed that the point in time at which the user gets involved was not that different from the case of typical finished public housing provision.

This can be generally described as follows:

1. Initial state / professional intervention and provision.
2. Beneficiary moves into the project and becomes resident.
3. Mis-matches and disatisfaction from the residents side .
4. Modification and transformation of accommodation by residents.
5. Dissatisfaction and resentment from the Local Authorities.

Hence the way those projects were planned and developed did not differ much from any typical public housing scheme which became transformed informally by its users. This pattern of distribution of responsibilites has to dramatically change if aided self-help and particularly Core Housing is to work.

2. TORCHS households are quite disadvantaged concerning their socio-economic characteristics. They are among the poorest households living in Tenth of Ramadan New City and they are less educated. In addition about two thirds of TORCHS household do not enjoy a secure tenure.

Security of tenure has always been considered as essential for self-help projects to work at all. Nevetheless experiencing all those disadvantages TORCHS household have a achieved reasonable results.

The accomplishment of TORCHS households could be best appreciated in terms of the size of habitable space they added to the existing housing stock of the New City. 202 housholds have added 350 rooms to the habitable space of the New City although the 127 of them do not have security of tenure.

Also the settlement pattern of the households in TORCHS is more progressive than in the rest of the New City.This is clearly reflected in the type and size of households found in TORCHS.

In addition their achievements include the economic generation and mobilisation of their own resources in order to consolidate and improve the quality of life in a New City environment. There are 22 private shops open within the settlement which provide a much needed commercial service to the community in addition to supporting the owners income. There are also many vegetable gardens created by the

residents on parts of the open space to providing a supplementary food source.

However although all of those achievements are included among the main objectives of the Egyptian New Cities policy but the quality of what TORCHS household have produced did not meet approval of the responsible Local Authority.

3. The security of tenure has a great impact on the qualtiy of extensions produced by the users but it has relatively smaller influence on the users decision of whether to extend the core house or not. Those who do not enjoy secure tenure still remain willing to build extension yet the quality of what they build is much lower than those with security of tenure.

4. The security of tenure offers owners the oportunity to choose when and how they build their extension.This is a priveledge which non-owners do not enjoy.The secure ownership produces a low consistency in the use of materials but of a relatively high constructional standard whilst the insecure tenurship produces material homogenutiy but lower constructional standards.

References:

Abdel Azeem,A. (1989) **The Communal Services of Low Income Housing Settlements,** Masters Thesis, El Azhar University,Cairo.

Bamberger,M. Gonzalez-Polio,E. and Sea-Hau.U. (1982) **Evaluation of Sites and Services Projects: The Evidence from Salvador,** Institute for Housing Studies BIE, The World Bank, Washington D.C

Basil-WBTL-Nassar and J.A.Jones Int.Inc, 1984 **Helwan New Community, Urbanisation Plann - 1985,** USAID,Cairo,Egypt.

Bhatt,V and Navarette, J. (1991) **The Self Selection Process; A Simulation Exercise.** Open House International Vol 16. No.4

Chana,T. (1984), **Nairobi: Dandora and Other Projects,** in Payne,G (ed), Low Income Housing in the Developing World; The Role of Sites and Services and Settlement Upgrading, John Wiley and Sons,Chichester.

Dayaratne,R. (1991) **Supporting Peoples Place Making: The Role of the Architect in Housing, Sri Lanka,** Open House International Vol 16. No 4.

Dayaratne,R. (1991) **Supporting Peoples Place Making: Theory and Practise - The Case of Support Housing in Sri Lanka,** PhD Thesis, Newcastle University.

Ettouney, S. and Abel Kader, N. (1989) **The Egyptian New Settlements, a Critical Review with Special Reference to Adopted Housing Policies,** Open House International Vol. 14 No. 2.

Fahmy, N. (1990) **The Household and Urban Characteristics of the 10th of Ramadan,** The National Centre for Social & Criminological Research,Cairo, Egypt.

Gardner,D and van Huyck,A. (1990) **The Helwan Housing and Community Upgrading Project for Low Income Egyptians: The Lessons Learned,** Agency for International Development, Cairo, Egypt.

HABITAT (1984), **Sites and Services Schemes; The Scope for Community Participation,** Nairobi, Kenya.

HABITAT (1986), **Supporting Community Based Housing: Sri Lanka Demonstration Project - Case Study, Part 2,** Habitat, Nairobi, Kenya.

HABITAT (1991), **The World Habitat Awards 1985 - 1989; Inovative and Successful Solutions to Global Housing Problems,** The Building and Social Housing Foundation, Lieicstershire,UK.

Hamdi,N. (1991) **Housing Without Houses,** van Nostrand Reinhold, New York.

Integrated Development Consultants (1989), **The Appraisal of Selection Criteria: The Housing and Community Upgrading for Low-income Egyptians Project**, USAID, Cairo, Egypt.

Katerogga,J. et al (1983) **Non-Conventional Approaches to Financing Low Cost Housing Schemes in Kenya: Two Case Studies for UNCHS (HABITAT)**, Housing Reseach and Development Unit, University of Nairobi,Kenya.

Mathey,K. (ed) (1992) **Beyond Self Help Housing**, **Mansell, London.**

Peattie,L. (1982) **Some Second Thoughts on Sites and Services**, Habitat International Vol 6 No 1 / 2.

Rodell,M. (1983) **Sites and Services and Low Income Housing**, in Rodell,M. and Skinner,R (eds), People,Poverty and Shelter, Methuen,London.

**SPSSX Users Guide** (1986), McGrow-Hill, Spss Inc,Chicago,USA

SWECO (1983) **Tenth of Ramadan New Industrial City: Growth Plan 1982 - Final Report**, The Research Studies Organisation, The Ministry of Development, Cairo.

Ward,P. (1984) **Beyond Sites and Services**, in Payne,G (ed), Low Income Housing in the Developing World: The Role of Sites and Services and Settlement Upgrading, John Wiley and Sons, Chichester.

# CHAPTER 6

## Level 2 of the Investigation : The Understanding of Quality from the Local Authority 's and User's View .

---

## 6.0 Level 2 of the Investigation : The Understanding of Quality from the Local Authority's and the Users' Views.Quality and Standards; The Local Authority versus the User.

After this socio-economic enquiry in TORCHS and core house transformation survey, the question of the understanding of quality and standards arises; what do the Local Authority and the Users consider as good or bad housing ? How do both sides agree or disagree on what is good or bad ? The following exercise was carried out in order to address these questions.

### 6.1 Procedures and analysis techniques.

There were two structured interview forms used in this level of investigation - one was for the users and the other for the local authorities. As mentioned before in this level of investigation only owners who have built extensions were included in the sample. 65 owners out of the total of 75 who have extensions were interviewed.

#### 6.1.1 The Local Authority Intereviews.

The Local Authority interview was carried out first. There were two steps which required two separate meetings with different members of the Local Authority.

The first was an informal meeting with two members of the Housing and Infrastructure department . No questionaire form was used for this meeting. Based on this

meeting, which was concerned mainly with the positive and negative aspects of TORCHS, a list of questions was prepared. These questions were presented to other local staff members in the second meeting. The questions dealt mainly with their perceptions of the quality of the TORCHS environment and the activites of the TORCHS users.

The local staff members interviewed in the second meeting were four members who included the Head of the Projects Department, the Head of the Design and Survey Studies Division as well as two other members from the Housing and Infrastructure Division which is part of the Development and Administration Department for the New Community.

The Tenth of Ramadan Development Authority is located in a large office building situated almost mid-way between the South and North limits of the city. It is accessible by a road from the Cairo-Ismailia highway. The local authority is composed of many departments employing some 200 administrative people. The Local Authority is a central authority. There is no division within its hierachy to deal with the different neighbourhoods as individual identities. Also there is no body, formal or informal, to represent the different neighbourhoods.

Fig 6.1 shows the hierachy of the local authority and its administrative departments, The Chairman of the Board is supported by five Divisions who in turn are supported by four Departments:

1. Projects.
2. Implementation.
3. Finance and Real Estate.
4. Development and Administration.

These Departments in turn have their own sub-Divisions and sub-Departments.

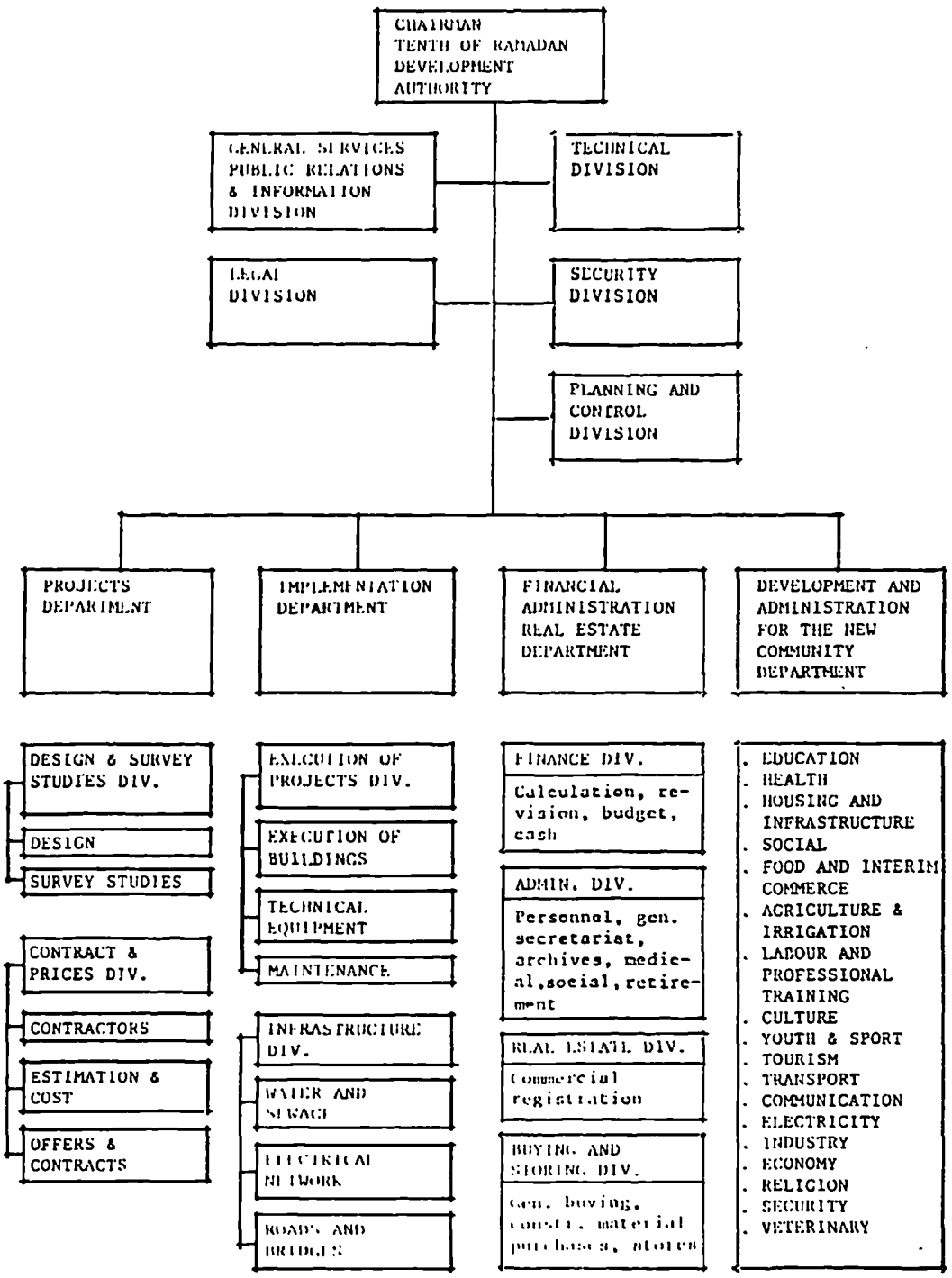



Fig 6.1 Administrative Departments of the Local Authority.

Clearly there is no separate administrative strategy to deal with the Core Housing scheme. In fact it is administered as if it were a finished housing project by the same central hierachy.

No concensus or consideration were given to its special nature which would require a different type of administration. The only distinction in treatment come when the authority try to control or police the user's building activity. This special interest is a manifestation of the method of ensuring the building and planning regulation are respected.

### 6.1.2 The Users Interviews.

The interviews with the users were conducted in the late afternoons , evenings or in the weekends in order to ensure the presence of the head of the household as much as possible. The wife's presence, comments and contribution to the discussion was always sought. In a few cases when it was difficult to meet the husband, the wife was interviewed instead. In many cases the discussion with the wife was valuable and forthcoming. At other times the woman said little and obviously had little to do with the decision making relating to extensions and building activity in the house.

The questions dealt mainly with the household satisfaction and disatisfaction with the house, its design, construction, finishing etc. Some complementary socio-economic household data was also required such as household size and income.

Also information about the income generating activites and their revenue (profit) was required. This type of information was sometimes difficult to get from the household so approximations were made based on the extent of the income generating activity i.e the number of livestock held or a shop and the type of goods sold. Also information was gathered relating to the size of the built area as well as that of the open area left for ventilation and natural day-lighting purposes. The type of construction materials and type of finishes were recorded for each house and its extensions.

The interview forms used for the Users can be found in Appendix 5. In order to process the obtained data of satisfaction criteria, Discriminant Analysis was selected as a statistical analysis technique (1).

---

1. Discriminant Analysis.
This is a statistical technique which can be used to find the linear combination of variables (independent variables) as the best discriminant between separate groups. Hence this technique allows the analysis of dependent variables measured on nominal or ordinal scales. Discriminant functions can also be used in predicting the consequence of change in one of the independent variables.It has mainly been applied in economics and urban Geography research (Willis,1986,pp 639 and 640). It has also beden used in the field of housing. Doiling used it in 1973 to study tenure choice. He tried to discriminate between two groups of council housing tenants - thos who could choose to become owners and those who would stay as tenants. He used socio-economic and preference criteria to build up his model (Doiling 1973, pp 206 & 207). Tipple and Willis also have used the same technique in order to distinguish between households enjoying different types of tenure in Kumasi, Ghana. They used discriminant analysis to predict the influence of the change of one of the households characteristics on their choice of tenure.(Tipple and Willis,1991). In this research Discriminant Analysis has been used to find out the variables which mostly influence the variation in the dependent variables which in this case is the satisfaction of the user.

## 6.2 Interview Results

### 6.2.1 The Local Authority's view

Through interviewing some members of the staff of the Development Agency of the Tenth of Ramadan a pattern of answers emerged relating to physical features as well as activites which were generated by the residential community. The points in question represent incidents which one would normally associate with core housing settlements but which in the local authority's view constituted poor quality.

The incidents ordered according to their significance were are as follows:

1. The lack of internal space on the built-up plot which should be allowed for ventilation and natural light purposes. Many of the householders tended to build extensions on most parts of the plot area without leaving enough open space for light wells, for ventilation and general natural lighting purposes. By doing this they maximize the habitable area for the dwelling but at the expense of the above mentioned internal environmental quality. This clearly was the most serious problem in the eyes of the Local Authority. In their views it is serious because it contravenes the building and safety regulations and it perpetuates the living conditions of slum dwelling.

2. Adding more floors than what was originally planned for both in terms of the structural effects

on exisiting foundations and on the extra load on gas,water,electricty and sewerage networks.

3. Using building materials such as recycled tiles, bricks, blocks, timber, metal and mud construction which could give a poor image to the new city monotony of plastered concrete and block infill. Such a poor image would discourage new settlers as well as private investors.

4. Many of the buildings remain unfinished from the outside giving the appearance of untidyness and neglect.

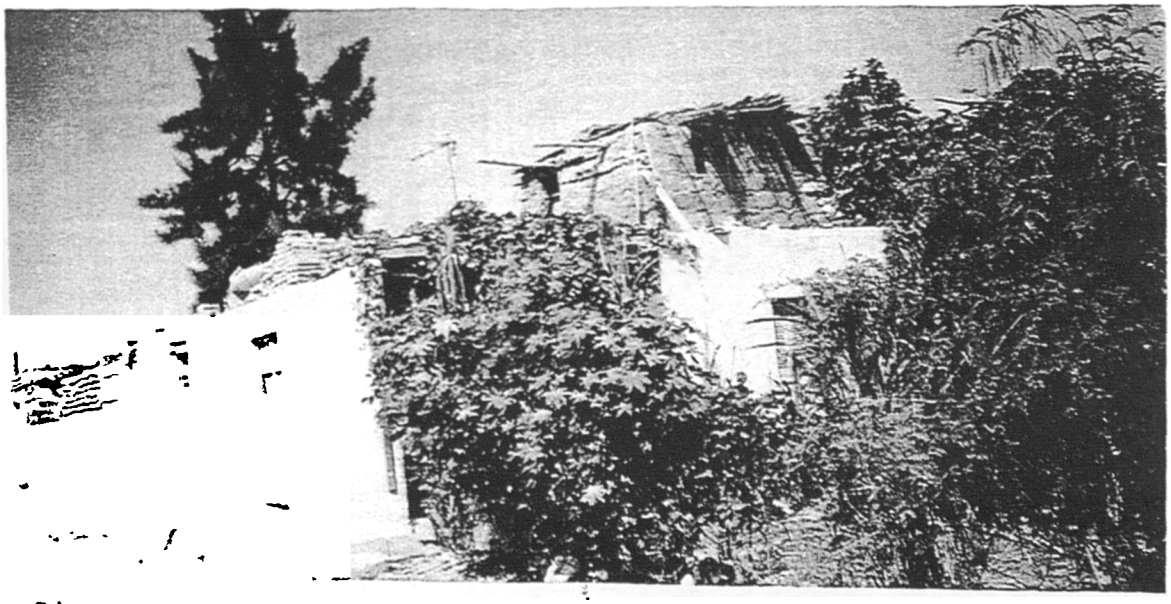
5. Using the roofs as storage space for building materials as well as the construction of small shacks used for pigeon and chicken rearing.

6. Taking over public space immediately in front of the dwelling or at the ends of blocks to be used as private gardens, crop growing or for animal breeding. Again the use of recycled material for the definition of gained territory is featured as the main complaint.

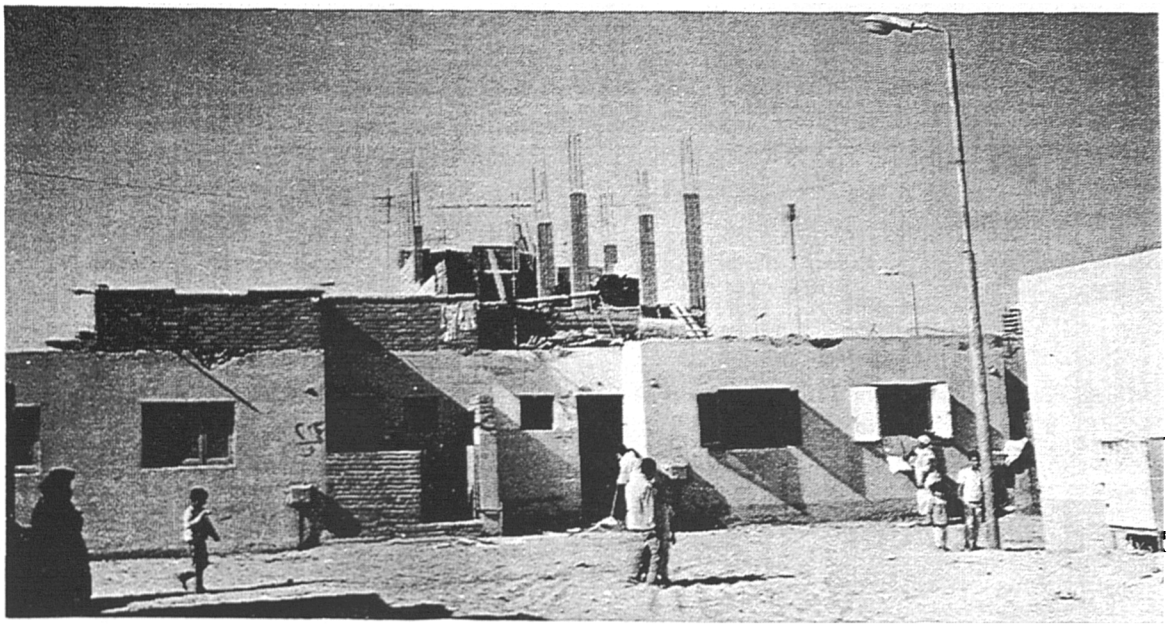
7. Opening of unlicenced and thus illegal shops make the task of the health inspection authorities very difficult. Hence such small trading establishments evade health inspection and taxation procedures.

Picture 6.1 The use of recycled building material.

Picture 6.2 Using the roof as a storage place for building materials and the construction of chicken and pigeon shacks.



Picture 6.3 The use of mud to construct a chicken house.



**Picture 6.4 The unfinished look.**

Through informal discussions with some of the younger members of staff it was clear that they related to the values which the users maintained and understood their needs which provoked such actions. They realized the benefits gained from adding more habitable space and from the aquisition of public space to supplement their incomes.

The younger generation of officials had far more sypmpathetic views to the users actions than did the older generation of officials. One could imagine that a financial grant to households to plaster and paint the outside of their house within a cost and time plan would be a measure to be readily adopted by the users and would have a greatly beautifying effect on the visual impact of the neighbourhood.

In fact one young staff member went as far as trying to legalize commercial activities within housing units. He managed to obtain the approval of the city planning consultants and it was agreed that commercial and small manufacturing actvities could be allowed within housing

units as long as they did not occupy more than 50% of the ground floor area.

However this took about one and a half years for the Head of the Development Agency to approve and when this was done the allowance was made only to nurseries and doctors clinics. No workshops or shops were permitted. The reasons given for the restrictions were that the main streets were not wide enough to accommodate the additional traffic which may result from the new commercial activities. Recently with new management in the local authorities any new establishment in addition to the few permitted activities are still prohibited in the residential areas.

### 6.2.2 The views of the users.

In order to find out the factors which best correlate to users satisfaction or causing users to be satisfied or dissatified with what has been built by their efforts. Discriminant analysis was chosen as a statistical technique to process the data obtained through interviewing 65 owners concerning their level of satisfaction in relation to the quality of the extension built. The quality of the extensions and the living conditons offered were described in terms of building materials, habitable area, availability of open space, occupancy rates and the existence of income generating activites.

It was found that there were five variables which best discriminate between the following three groups of users.

1. Those who are generally satisfied with their houses.
2. Those who are neutral i.e neither satisfied nor dissatified.
3 Those who are generally dissatisfied.

The five variables ordered according to their correlation powers are as follows:

a. The structural condition of the extension.

A dummy variable was used to respresent the structural type as well as the building materials used in the construction. It was found that satisfaction is related to sound structural conditions.

b. The occupancy rate represented by number of person per room.It was found that satisfaction is related to the achievement of lower occupancy rates.

c. The open to built up ratio in the dwelling.
It was found that satisfaction is related to a low open to built up ratio. This confirms that satisfaction is related to the availability of more habitable space in the dwelling which consequently leads to lower occunpancy rates. This also reflects that ventilation and natural daylight problems

which would be expected due to lack of internal space in the dwelling do not seem to be affecting the level of user satisfaction.

d. The cost of building the extensions.

It was found that satisfaction is related to the greater amount of money invested in the extension.

e. The amount of investement in the extension as a proportion of the regular household income. This was taken throughout the length of stay in the dwelling.

The relationships between the last two variables, the cost and the amount of investment in the extension and the users' satisfaction cannot be interpreted literally.

For example to say that users are more satisfied when they spend more money on their extension or that the more money they spend on their extension as a proportion of their income the more they are satisfied would be over-simplifying. They are best understood as by-products of the two main physical variables of the structural condition of the extension and the open to built-up ratio.

Logically speaking the desire for more sound structural conditions and more built up area i.e more habitable space requires more financial investment.

Another interesting point concerns the amount of investment in the extensions compared to the households regular income throughout the length of stay. It was found

that 66% of the households who were reported as generally being satisfied ( user group 1) had spent more than 40% of their regular income on the extension. In some cases the amount spent on extensions reaches a level of three times the regular annual income.

This actually reflects the households reliance on other sources of finance such as selling property, savings and inheritance in order to finance the extension. It is not difficult also to imagine that users relate their degree of satisfaction to the availability of relatively large sums of money in order to achieve a certain quality of construction.

For the group who were classified as generally being satisfied ( group 1 ) it was found that the average amount of expenditure on the extension per household is about 85% of the regular annual income.

For those who were classified as generally dissatisfied with their dwelling ( group 3 ) the percentage drops dramatically to less than 10% of the household's regular annual income.

It is important to note that when the overall efficiency of these five variables where used as a model for reclassifying the users into their resepctive groups - according to their actual stated levels of satisfaction was tested, about 81.6% of the households were correctly classified into their actual groups.

Table 6.1 shows the detailed classification results.

| Actual group | No.of Cases | Predicted Group Membership | | |
|---|---|---|---|---|
| Group 1 | 32 | 29 | 2 | 1 |
| | | 90.6% | 6.3% | 3.1% |
| Group 2 | 10 | 4 | 3 | 3 |
| | | 40.0% | 30.0% | 30.0% |
| Group 3 | 23 | 0 | 2 | 21 |
| | | 0.0% | 10.5% | 89.5% |

Table 6.1 The Classification Results of the Users According to their Level of Satisfaction.

Therefore it is obvious that there are some aspects which both sides agree upon as causes for inconveniences or bad quality. However it was not clear yet how far the two sides agree on the order of the aspects of inconvenience.

## 6.3 Prospects for Agreement.

a. There is agreement between User and Local Authorities on the structural conditions of the dwelling as a factor which strongly affects its quality. Sound structures

and durable building materials are both important to quality as far as the two parties are concerned. There were 21 users who identified poor condition as an inadequacy. Out of them 16 have related poor structural conditions as the most disturbing problem they have.

b.Although lack of ventilation and natural light in the dewlling did not seem to have any impact on users satisfaction , some users ( 9 households among 30 who have ventlation problems),indicated lack of venlation or dark interiors as sources of inconvenience. As a matter of fact,users previously have related their satisfaction to the existance of less internal open space .

Less internal open space is a direct factor behind problems of lackof ventilation and natural daylight. Hence, the positive relationship between less internal open space and users satisfaction could be missleading if literally interpreted .

Less open space here is an inescapable by-product of the Users strong desire for more indoor habitable space and thus lower occupancy rates. The fact that some users indicated lack of ventlation or natural daylight as an inadequacy confirms that the appreciation of these factors are not completely absent, they are simply overshadowed by other more pressing needs.

Such problems are the unavoidable outcome of standardised plot sizes. Pre-determined plot sizes in addition to a pre-determined number of floors require a pre-determined pattern of household sizes.

c. One of the most controversial aspects regarding quality in the case of TORCHS are the informal activities and their appearances. Whilst the existence of such activities and the amount of income generated by them cannot be underestimated especially in relation to the economic, social and physical development of the community they failed to be significiant enough to be used as one discriminative variables previously described. As an example of this the amount of income generated from informal activites such as room letting, shops etc these were correlated for each household with each person's share of the regular household income and it showed a negative correlation with the co-efficient of 0.355 which has a significance level of 0.01. Thus proving that the less regular income a household has the more it will attemp to generate income from informal activities. Meanwhile the existing informal activities was clearly a reason for the Local Authority's dissatisfaction.

d. Although finishing the external surfaces of an extension was not among the variables affecting User's overall satisfaction the unfinished interiors were sometimes reported as a deficiency from the User's side.

Some users ( 14 out of 32 who did not have finished exteriors ) reported unfinished facades as an inadequacy. Meanwhile it was clearly one of the reasons behind the Local Authority's dissatisfaction. Unfinished exteriors however are one of the inherited characteristics of incremental development projects. When the financial resources are limited the finishing of exteriors are not regarded as a priority until other pressing needs are met.

e. The users answers to questions 10 to 14 of the questionaire ( see Appendix 5 ) have confirmed that sound construction comes as a first priority to most of the households. For example 65% of the sample traded off more numbers of rooms for a concrete skeleton structure. Meanwhile having the opportunity to open a shop or to enjoy two free aspects on their plot were clearly prefered to having an additional fourth room. However on the point concerning having a private garden or an additional room the answers were equally divided. In addition it is quite clear that the majority of users would trade off finished interiors and exteriors for more rooms. ( 72% selected a 4-roomed flat without any finishes as a first option and 36% selected a 3-roomed flat with interior finishes as a second choice.

Finally, these findings confirm that there is an agreement between the local authorities and the residents on the importance of sound construction and building methods. At the same time they also confirm an existing disagreement on the importance of finished exteriors and the opening of shops and other informal income generating activites.

The authorities regard a house with external finishes as an essential pre-requisite for good quality and whilst the residents do not disagree they consider the requirement for more habitable space to be a greater importance.

There is a wider gap of opinion concerning the opening of a shops. The authorities consider this type of action to be a sign of informality and a violation of laws

leading to "slum" appearances whilst the users consider it as an economic necessity as well as being a positive contribution to the neighbourhood services..

## 6.4 SUMMARY.

1. Some of TORCHS problems are due to the existence of two different understandings of quality and standards, one from the Local Authority's view and the other from the User. This has resulted in a situation of confrontation rather than collaboration. Other problems are the result of pre-determined standards which assumes the existence of a pre-determined socio-economic structure of the resident population.

2. A close examination of TORCHS development shows that there are no real grounds for discrediting core housing as a type of provision that automatically leads to the creation of slums. TORCHS users are quite able to distinguish between bad and good quality in terms of construction and the quality of space both inside and outside the house.

Most of the user's building activity described by the Local Authority as bad quality did not occur out of the users own free choice. Rather the limitations which have been imposed on them are responsible. Most important of these limitations is the lack of security of tenure which many of TORCHS users experience. Another major limitation concerns the initial provision, design and structural properties of the initial provision. On the one hand, the standardised plot size, dimensions and identical core house position have

all imposed limitations on the residents freedom of choice when building the extensions. On the other hand, the residents have a variety of needs and requirements to be met within these given limitations.

3. The informal and illegal activites of TORCHS residents are an integral means of supporting their economic levels. TORCHS hence does not only provide its users with houses but it also provides them with additional income opportunities to improve their living conditions . From the authorities point of view these economic activities are considered negative aspects in the project development. This is a misguided judgement based on a set of unrealistic economic standards and a lack of understanding concerning the living and working requirements of the urban poor.

4. The varying priorities which TORCHS residents have, do not mean that they have major differences in their appreciation of quality and standards. The quality values shared by most of the residents relate to sound construction, often including the use of skeleton concrete structures, low occupancy rates, privacy and the use and maintainence of public space. Other criteria such as natural ventilation and daylight factors are shared by the users but of a lower priority.

5. The local authority is inflexible towards the use of alternative designs,construction methods, building materials and generally oppose the alternative use of space and activities which do not conform to their prerscribed plan of occupations and uses.

References:

Doiling, J. (1973) A Two-stage Model of Tenure Choice in the Housing Market, Urban Studies, No.10,pp 199-211.

SPSSX Inc., (1986) SPSSX User's Guide, McGraw Hill, Chicago,USA.

Tipple,G. and Willis,K. (1991) Discriminant Analysis,Tenure Choice and Demand for Housing Services in Kumasi, Ghana, in Tipple,G and Willis,K. (eds), Housing the Poor in the Developing World - Methods of Analysis, Case Studies and Policy, Routledge, London.

Willis, K. (1986) Discriminant Analysis, in Models in Urban Geography Part 2 volume 4b. ( ed ) Yadav, C. Concept Publishing Company, New Delhi, India.

# CHAPTER 7

## Level 3 of the Investigation: In-Depth Case studies.

---

# 7.0 IN-DEPTH CASE STUDIES: LEVEL THREE OF THE INVESTIGATION:

The third level of investigation addresses the individual users decision making process. This level of investigation attempts to relate the physical built results of the users decisions with the various factors and constraints which have influenced their choice.

A considerable part of this chapter is devoted to investigating users limitations of choice as well as their efforts in overcoming those limitations.

Viewed from one point of view they would represent a strategy of action and from another the results could explain various choices which the users have made, yet to an outsider they may appear unjustifiable or be misunderstood.

## 7.1 LEVEL 3: Procedures and Analysis techniques.

This level of investigation has required a qualitative case study approach in order to examine the the decision making processes of different households.

### 7.1.1 Procedures.

Extensive interviews with selected households were carried out. The interviews consisted of two parts. The first consisted of a structured interviews with specific pre-stated questions. These questions were mainly concerned with the household socio-economic characteristics.

The second consisted of open ended questions which were not necessarily typical for the each of the households chosen. The questions varied according to the aspect or aspects which the researcher was interested in revealing in each household case. However the basic structure of the questions asked was in the form of: "Why did you take this **action** under these **circumstances?** The action and the circumstances usually would vary from one case to another. The this question was usually followed by another in the form of: "Why did you not take **that action** instead of the action stated in the previous question ? The proposed action in this question would be another possible option which the user has dismissed or disregarded in favour of his actual choice.

It was found that such questions which might sound as if they contained some citicism of the users decisions were quite helpful. Usually they provoked the user to explain his or her decision in rather a defensive manner. This was quite revealing in terms of the limitations they had to work through.

In addition to the previous two parts of interviews another form of data was also collected. This was the drawing up of a detailed plan of each house indicating the construction and finishes as well as the type and position of furniture. The use of space outside the plot was also taken into the drawing in cases where households had claimed such space. Photographs were obtained whenever possible.

For the interviews both the head of the houshold and the wife's points of view were taken into account if they happened to be different.

Two visits to each household were required. The first was designed towards the filling in of the structured interview forms and the drawing of plans, recording of furniture positions and the use of space.

The second visit the researcher had to decide which were the points worth investigating in each case. Hence the open ended questions were prepared for the next visit. However most of the households were visited three times. In each case an updating took place of the observations about household behaviour. use of space and the physical development in the house.

### 7.1.2 Sample Selection

In order to select the householders included in the third level of investigation certain decisions were taken by the researcher.

1. Only householders who have extended their core houses in one form or another were to be included in the sample.

2. No company residents who were bachelors were to be included in the sample.

3. No tenants were to be included in the sample.

4. Although in TORCHS the company residents outnumbered the owners ( 133 company residents and 80 owners ) the sample should include more owners than company residents. This is because there is more variety in the extensions built by the owners than in those by the company residents.

5. All of the different plot types and positions should be in the sample.

The 52 sample consisted of 11 company residents and 41 owners. Included in this sample there are 13 houses of plot A type, 12 of Plot B, 9 of plot C and 18 of plot D. Fig 7.1 shows the distribution of the sample.

Although the selection of most of the samples was random, in some cases the researcher was introduced to the householder by a previously interviewed householder. This was accepted if the original household had satisfied the predetermined selection criteria. These cases totalled five in the sample taken.

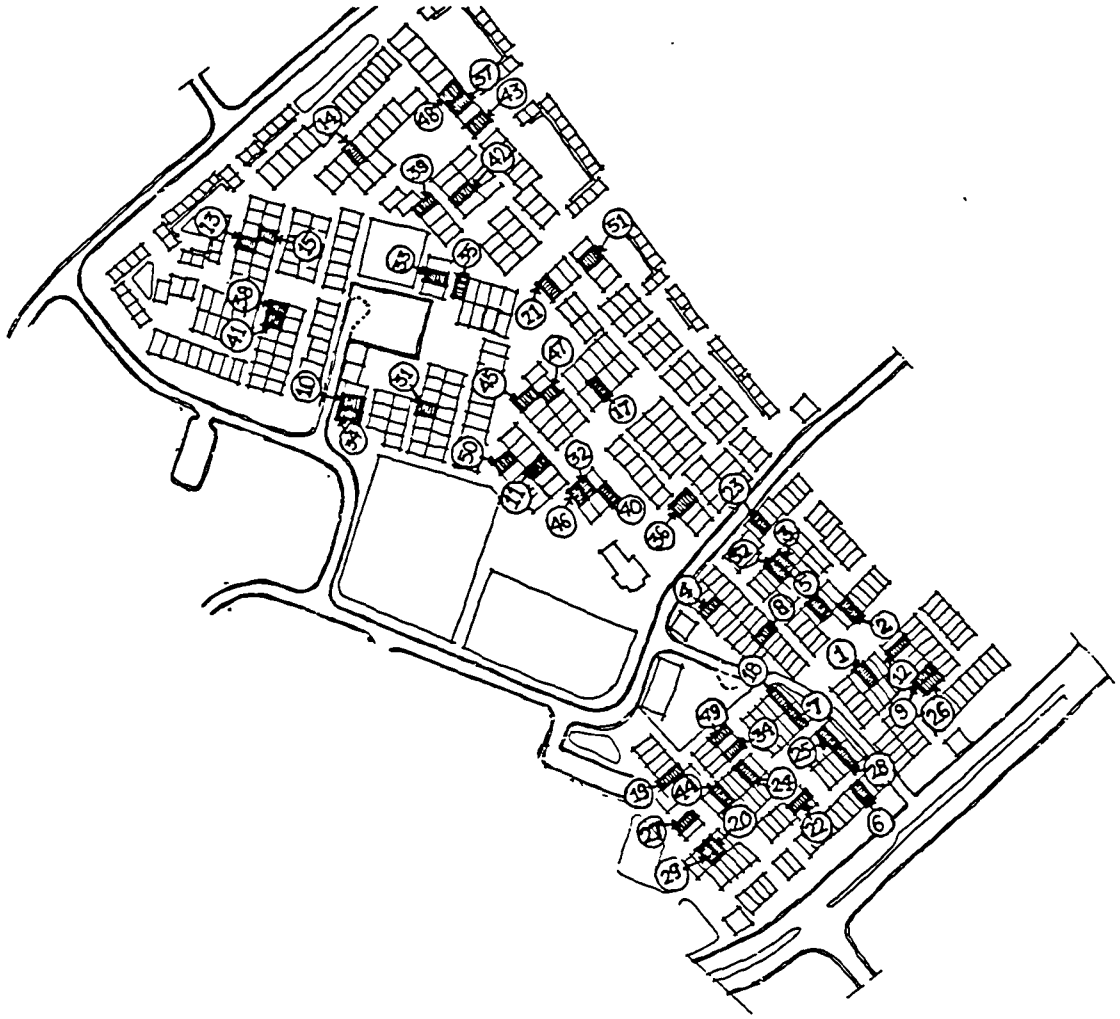


Fig. 7.1 The Distribution of the Sample.

### 7.1.3 Analysis Technique.

The data gathered during level three of the investigation included three different sets of data. These sets are 1. detailed plans 2.socio-economic quantitative data and 3. data in a narrative form of stories. This last set usually came from answers to the open ended section of the interview questions or out of the interviewer's remarks and observations.

The three sets needed to be processed and converted into compatible forms of data without losing their complexity and variety. Although the 52 plans of the extended core houses could have easily been converted into numerical matrices of numbers of rooms and amounts of built space it would have meant the loss of relationships between those numbers, the socio-economic and cultural factors which have influenced them. The plans, socio-economic data and stories together had a waved-in richness which any form of matrix of numbers would certainly be unable to acknowledge.

Since the plans represented the physical outcome of the users decision making process it was decided to segregate them into different types. Then the variations between the types was investigated with respect to the qualitative as well as the socio-economic data concerning each case.

## 7.2 The Extension Types.

The 52 cases were divided into two Groups. Group A consists of plots which accommodate a single household. Group B consists of plots which accommodate two or more households. Both groups were further sub-divided into the number of rooms in each house. In additon the Group B was further sub-divided according to whether facilities and access were shared or independent.

In Group A *there were 32 cases* and in Group B, containing the rest of the sample, 20 cases. Group B included dwellings which had rooms let out to lodgers or parts occupied by different households (i.e married sons or daughters.)

A great deal can be learned from knowing the number of households living in the house and how the use of facilities and access to the unit have been arranged. Such information can reveal some of the socio-economic and cultural considerations surrounding the construction of the extensions.

The whole classifiction concerning the number of households per plot, the number of rooms within each houshold and the households sharing or with independent access and faciltities is shown in Table 7.1

| No.of rooms | Group A | Group B | |
|---|---|---|---|
| | | Access and Facilities | |
| | | Shared | Indep-endent |
| 2 - 4 rooms | 18 | - | - |
| 4 - 6 rooms | 14 | 6 | 6 |
| more than 6 | - | 4 | 4 |
| sub-total | 32 | 10 | 10 |
| Total | 32 | 20 | |

Table 7. The Classification of Group A and Group B.

The plans of the 52 cases grouped according to the criteria described can be found in Appendix 6. The following shows an abstract example from each of the sub-groups.

1. Group A.

1.1 Group A. Houses with 2 - 4 rooms.

In the 18 cases belonging to this sub-group all houses have retained the original 1 roomed core house and have added 1 to 3 more rooms. A kitchen is counted as a room only if its area is large enough to accomodate more than cooking space. The built up density on the plot for this group ranges from 30% to 75% of the plot area. See Fig 7.2.

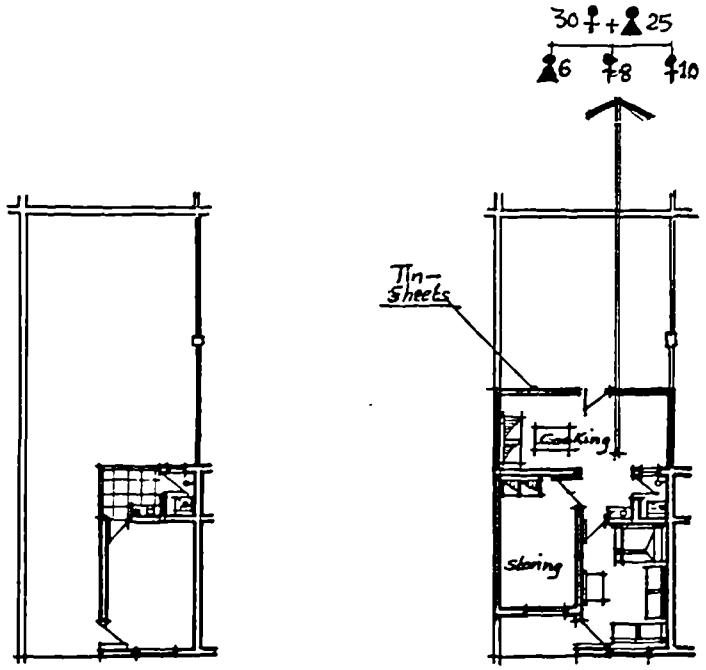



Fig 7.2 An example of Group A. 2 - 4 rooms.

1.2 Group A. Houses with 4 - 6 rooms.

Generally speaking, in the majority of the 14 cases which belong to this sub-group the whole of the ground floor has been developed or is undergoing the development to complete the ground floor to 100%. It is this sub-group into which alterations to the core house itself were found. Two among the 15 cases have demolished the core house completely and have replaced it with a new construction. In 5 cases the core has been only partly demolished which resulted in the removal of the kitchen / toilet area whilst the initial room has been retained. In these case a new kitchen / bathroom area has been built towards the back end of the plot. As it can be seen from Fig 7.3. The built - up density for this sub-group ranges from 75% to 100%.

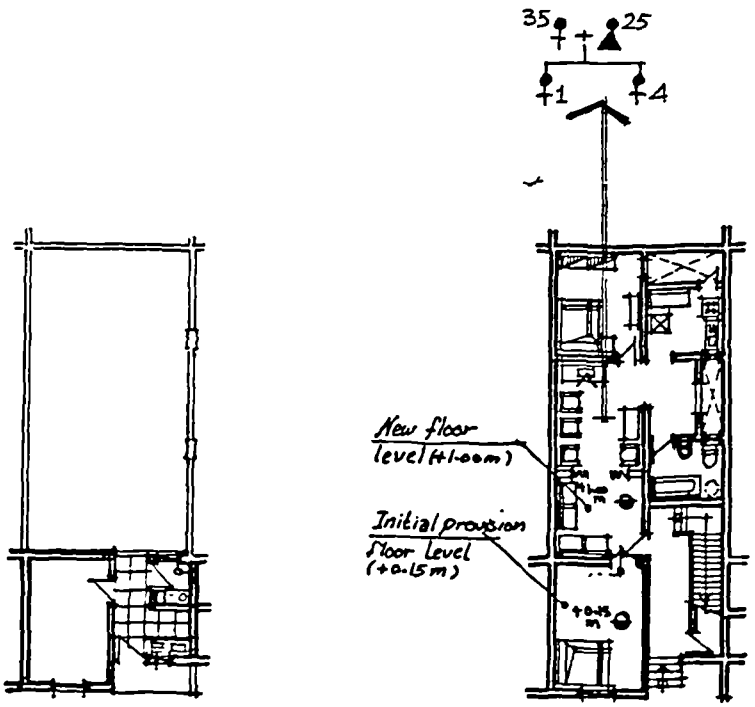
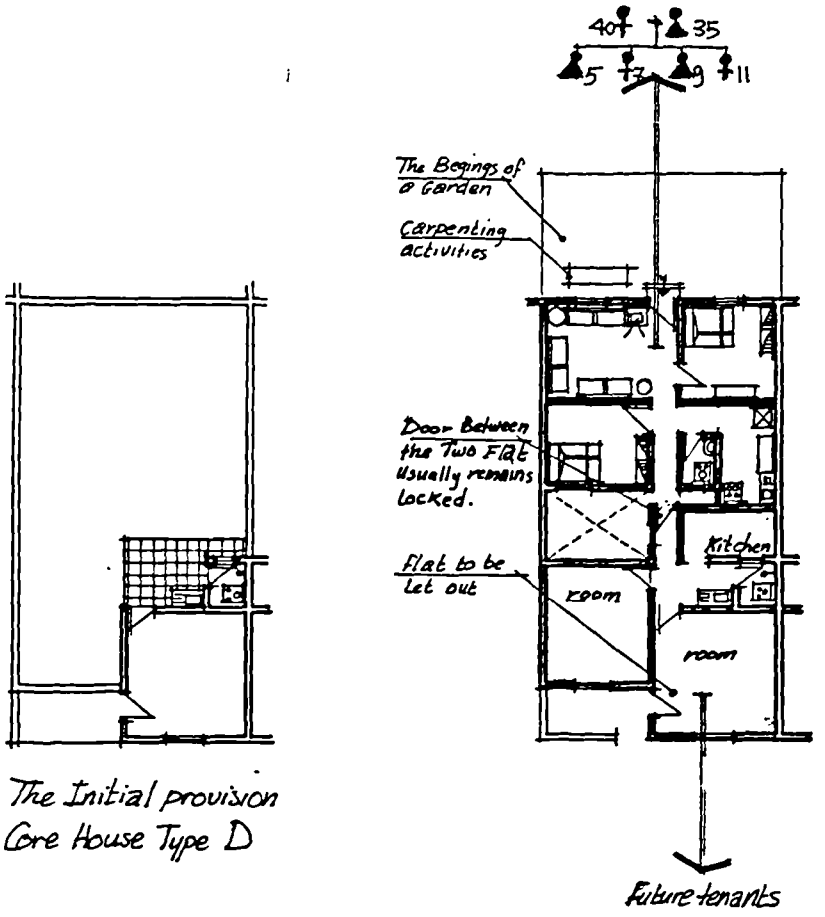



Fig 7.3 An example of Group A. 4- 6 rooms.

2. Group B.

2.1. Group B. Houses with 4 -6 rooms.

All the 12 houses which belong to this sub group consist of 2 or 3 units of accomodation of separate households. Some units are let out to tenants or lodgers whilst others house relatives of the original household such as brother, parents or married sons and daughters. The built up density for this sub group ranges from 90% to 100%. Figs 7.4a and b. show an example for each of the two cases of shared and independent access and facilities.




Figs.7.4a An example of Group B. 4 -6 rooms with independent access and facilities.

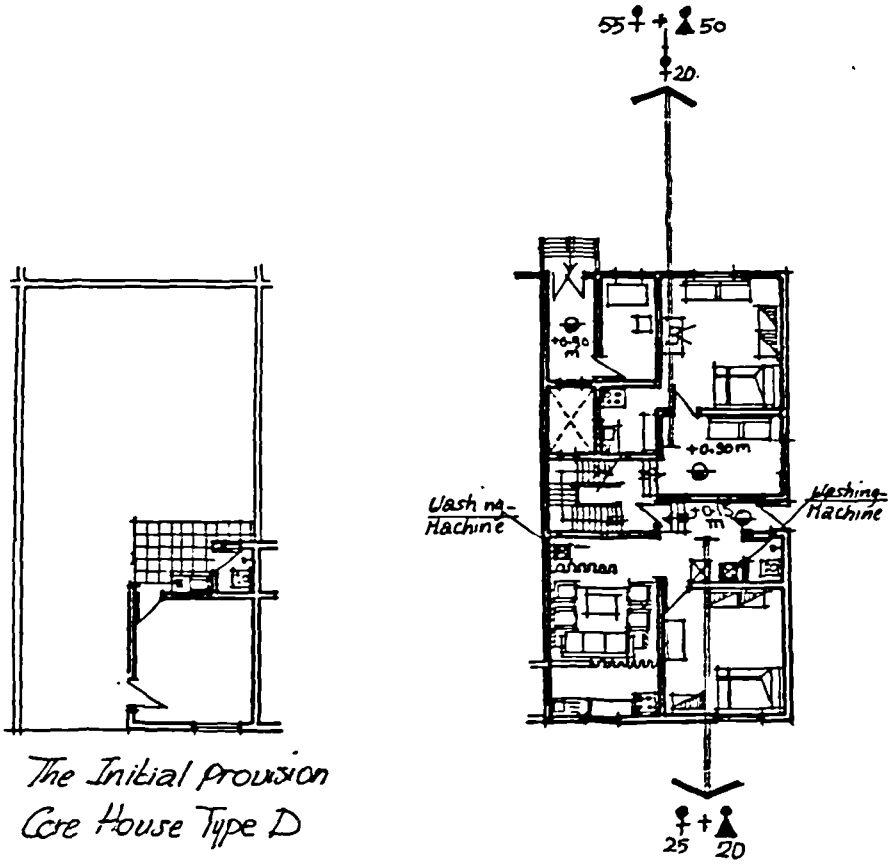



Fig 7.4 b. An example of Group B. 4 - 6 rooms with shared access and facilities.

2.2 Group B. Houses with more than 6 rooms.

The 8 cases which belong to this sub-group all consist of more than one floor. Six cases have two floors and two cases have three floors. The number of units of accommodation ranges from two to seven. Figs.7.5a and b show an example of independent and shared facilties.

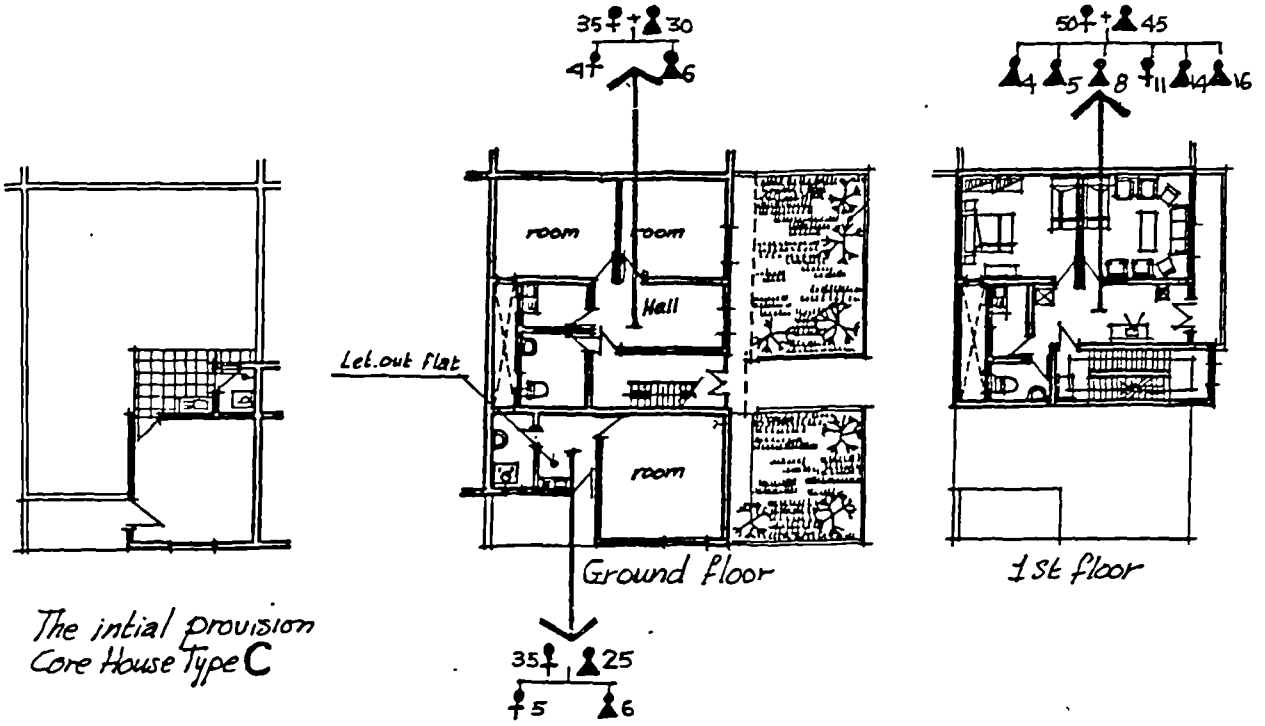



Fig 7.5a An example of Group B. More than 6 rooms with indepenent access and facilities.

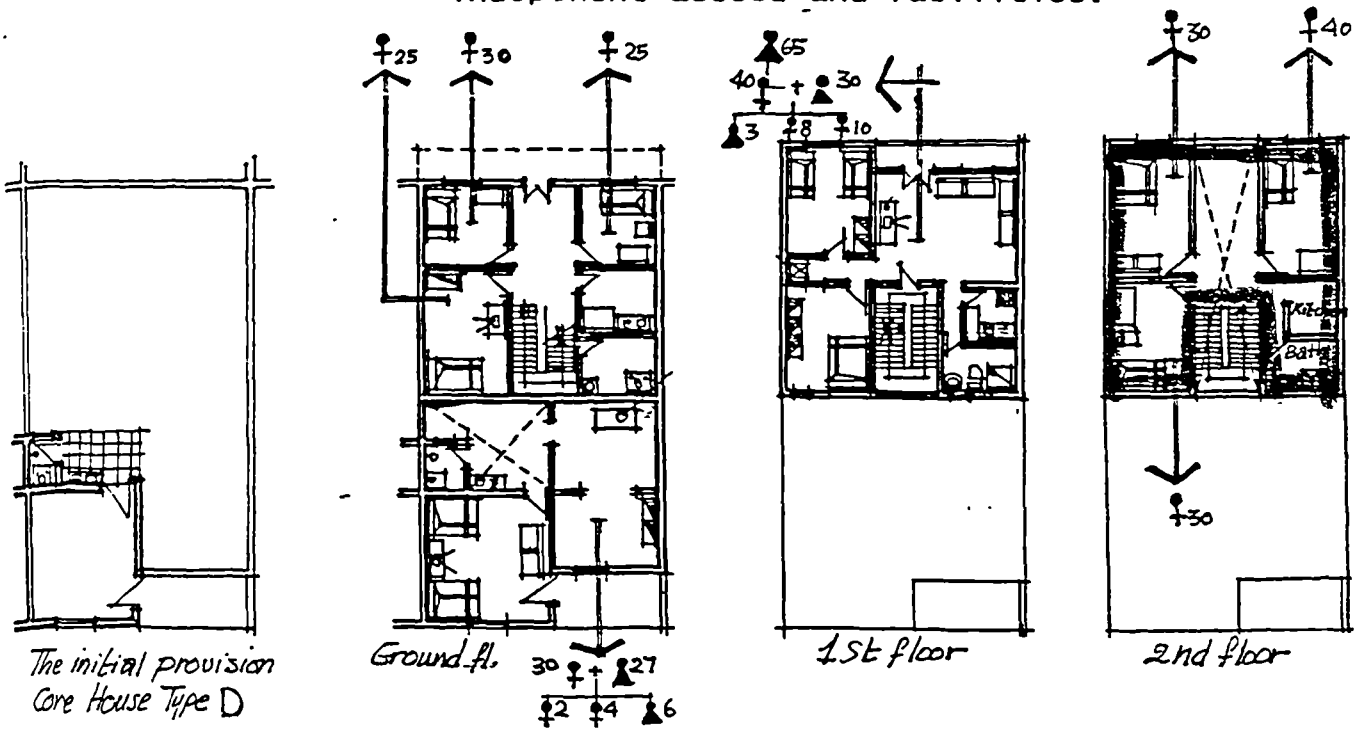



Fig 7.5b Group B Houses of more than 6 rooms with independent access and facilties.

## 7.3 Aspects of Decision Making.

Besides all the psychological aspects of decision making which might make a study of this nature very difficult there are some aspects which are easier to point out.

The social and economic aspects which have a more direct relationship with the results of decisions are usually easier to investigate as they present themselves in the form of logical answers to certain problems.

However, in TORCHS case, when such reasoning became less obvious or rather ambiguous one expected either psychological factors or the constraints of choice to be responsible. Not suprisingly these two factors were overlapping in many cases. When freedom of choice is subjected to constraints of limitations we reach in ourselves for legitimate compromises. It is then when all factors including psychological ones compete with eachother to influence our choice.

### 7.3.1 Economic Considerations and Extension Type and Size.

None of the eleven cases of company residents included in the sample have extensions built on over 70% of the plot area. Usually those extensions consist of one or two rooms or sometimes a room and a kitchen (cooking area only). The maximium number of rooms built by a company resident was found to be three.

As mentioned before in Chapter 5, company residents

built their extensions usually out of load bearing brick walls and timber roofs. Sometimes corrugated sheets were used as a roofing material but only on limited occasions compared to the frequently used timber. Sometimes recycled building materials are used such as bricks, chipboard, door and window sets.Mud is used to build chicken coups on the roof of houses or in the small courtyards. In company residents houses there is a great reliance on self build whilst the hiring of labourers for specific tasks is more limited. Out of the 11 cases there were only four company residents who hired labourersfor specific jobs such as bricklaying. In two cases assistance was sought from relatives.The construction costs in the case of company residents ranged from as little as L.E 80.00 to just over L.E 1200.00.

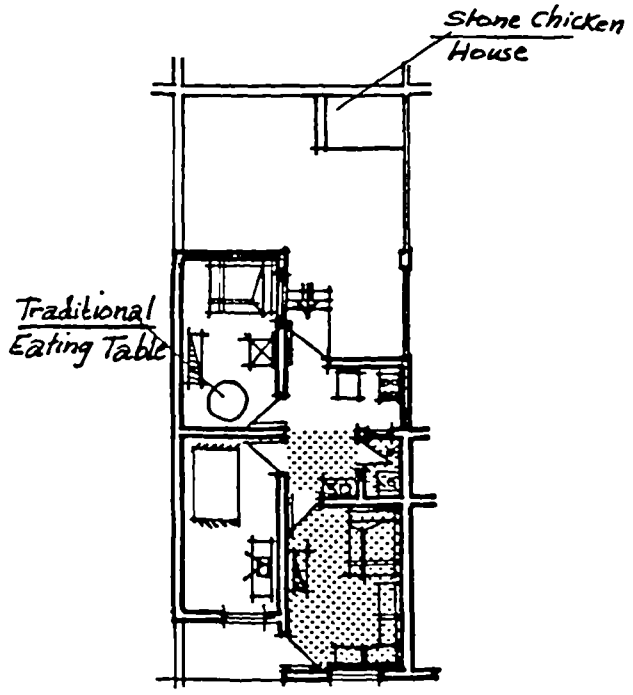



Fig 7.6 Ashour's house, Case 8.

The question which still requires an answer is how do company residents who extend their houses deal with the lack of security of tenure. An example of a company resident who has built a two roomed extension is the case of Ashour. (Case Study 8, Group A). Ashour has only three children. All of them are under 10 years of age. In justifying his decision to build the extension

without security of tenure and having no guarantee from the factory owners that he will be compensated in the case of eviction Ashour argues: "The future is in the hands of God, I don't want my family to live in a single room while there is space available to build on.....anyway so long as the factory is doing well financially we have nothing to worry about."

Ashour's words reflect the compromise he has to make in order to justify his unsound economic decision. It is clear that the future risks have been put aside or underestimated in order to be able to achieve and improvement of his household's living conditions.

Other company residents gave more or less the same reasons to justify their decisions. For example Sakr ( case 18, Group A ) mentioned in his answer that the factory owner is a religious man who would not throw them out of the house unless he had very strong reasons. Sakr also mentioned that the same factory owner has already transferred "ownership" of another house to its occupier, a fellow worker. Sakr also added that he has

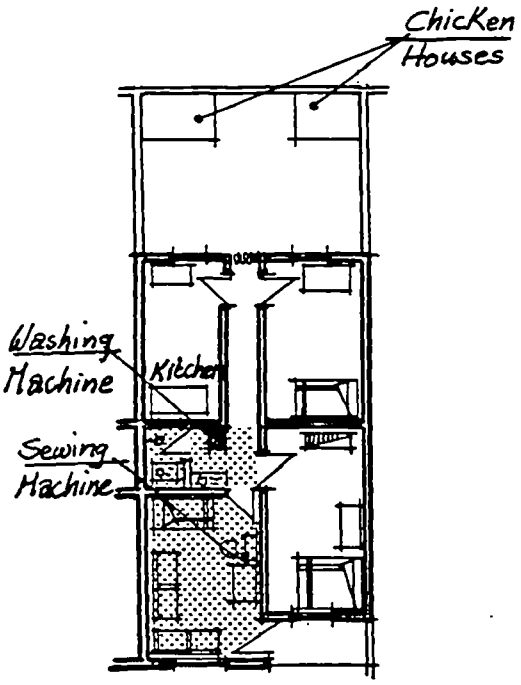
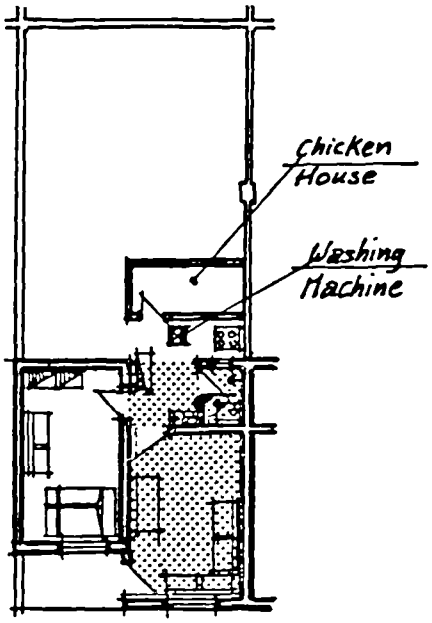



Fig 7.7 Sakr's House. Case 18.

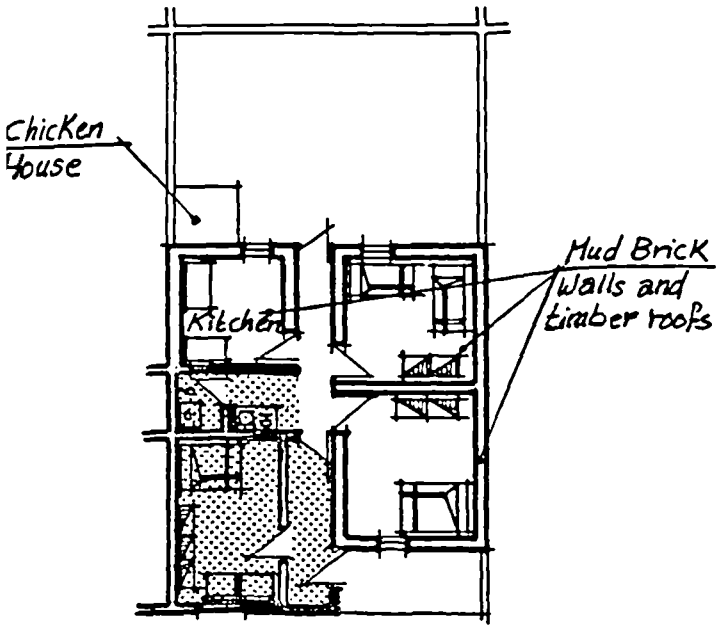
been promised the same transference of ownership by the factory owner in the near future.

In the case of owners the built up floor areas ranged from a minimum of 36% to a maximum of 260% of the plot area. The cost of the extension also ranged dramatically from just under LE 100.00 to LE 25,000.00.




The smallest extension is that of Bakr ( case 4, Group A ) who has had one room built out of load bearing brick with a timber roof in addition to a chicken house.

Fig 7.8 Bakr's house. Case 4.




The cheapest owner built extension was that of Mohmadeen ( case 11,Group A) who had built two rooms and a kitchen out of adobe walls with a timber roof at a cost of LE 100.00 Mohamadeen had used soil dug out of his courtyard to make the adobe bricks.

Fig 7.9 Mohamadeen's House. Case 11.

The most expensive extension was that of Gerges (case 48, Group B ). His extension consists of a three storey building with a concrete skeleton frame and brick infill walls built at a costs of L.E 25,000. This extension contains 16 habitable rooms ( bedrooms and a living room ) four kitchens and five bathrooms, in addition to a large chicken house on the roof.

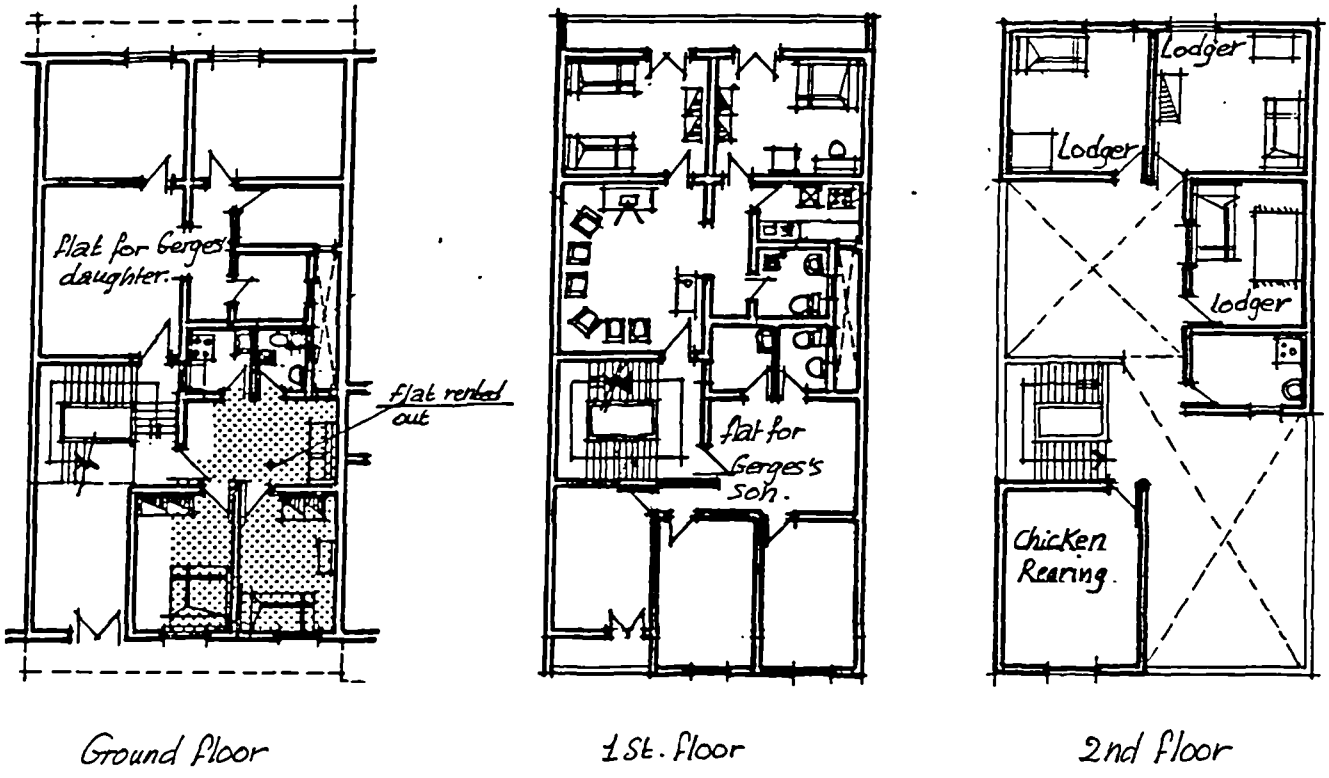



Fig 7.10 Gerges's house. Case 48.

The question which presents itself here is why the enormous variation in what owners have built in terms of area and cost, in spite of the supposedly homogenous socio-economic profile of TORCHS as was shown in Chapter 5.

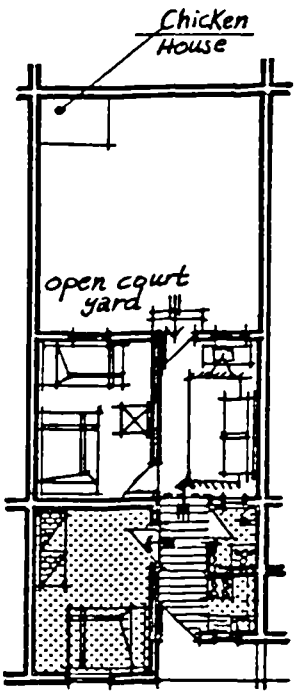



Fig 7.11 Samir's house. Case 7.

An example of an owner who put a limited investment in his extension is Samir ( case 7, Group A ). Samir, in spite of having sufficient resources to build a larger extension, has been contented with building a two roomed extension.

As he explained, "There are more priorities in life than having a large house. I have six children who need to be educated....

....three of them are receiving private lessons otherwise they will not be able to make it at school. Those lessons cost me a fortune every month. What good another two or three rooms will do them if they are unable to finish their education. I am not prepared to deny my children their right to education for the sake of some appearances." In Samir's case a priority such as childrens education has occupied a more important place in his thinking than building a

substantial house. In this case it is education that is seen as the means of socio-economic mobility and not materialistic aquisitions.

Meanwhile,in the case of Gerges who has only two teenage children ( a boy of 14 and a girl of 12 ) he has nevertheless built a completed three storey house. The family, Gerges, his wife and the two children occupy a part of the ground floor. They let out the initial core at the front of the house to a widow and her daughter, whilst the first floor is completely unused. When he was asked why he had built the first floor, left it unoccupied and was not even intending to let it out he explained; "Now I have the money I have enough to secure my childrens future at least concerning their housing. May- be tomorrow this money will not be enough to build the same construction. Also I might not be fit enough to supervise the work as I did. I bought every piece of material myself and I sometimes did the bricklaying. As I get older I am not sure I could do that again. " He goes on to say, " I had to sell a small piece of land my father left me in Suhag, a village in upper Egypt, to finance the construction. If I leave my children a piece of agricultural land to inherit what could they do with it ? They are not going to farm it, they would sell it and might not be wise enough to use it for sensible things. At least I know I will have left them something they could use."

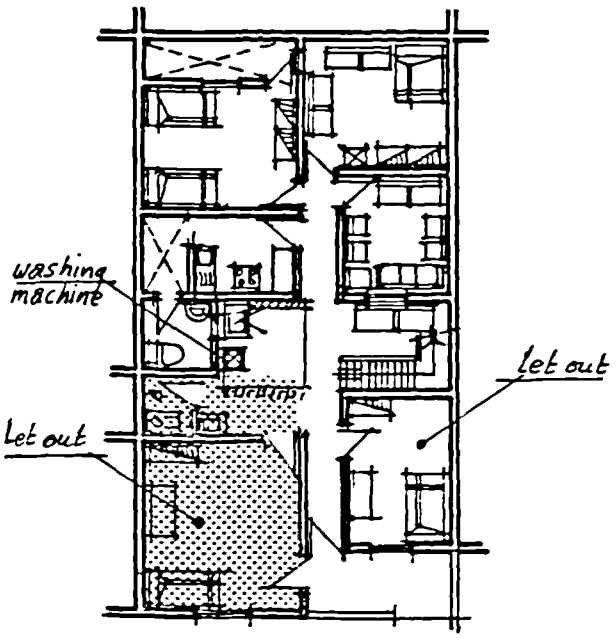
So obviuosly some households have economic reasons to build small extensions and other have economic reasons to build larger and more costly extensions. The amount of money spent on the extension does not always depend on the household

affordability. Therefore the term "affordability" is a vague determinant in describing users abilities or willingness to spend their money on house construction.

The houses built by TORCHS residents are NOT merely residential units, they are dwellings, sources of income, means of subsistence, status, savings and a future investment.

However whilst economic considerations can explain a great deal of the courses of action which people take they certainly do not explain everything . Whilst one may argue that all action is econimcally based other ideals and aspirations of a non-economic nature are major determinants in peoples priorities of affordability.

### 7.3.2 Socio-Cultural considerations in the Extension Design with respect to sharing facilities and access.




Houses which are self contained are always occupied by a family or an extended family. Lodgers rarely share the same facilities with thier landlords . However, sometimes landlords are forced to share the same access with thier lodgers, due to plot restrictions.

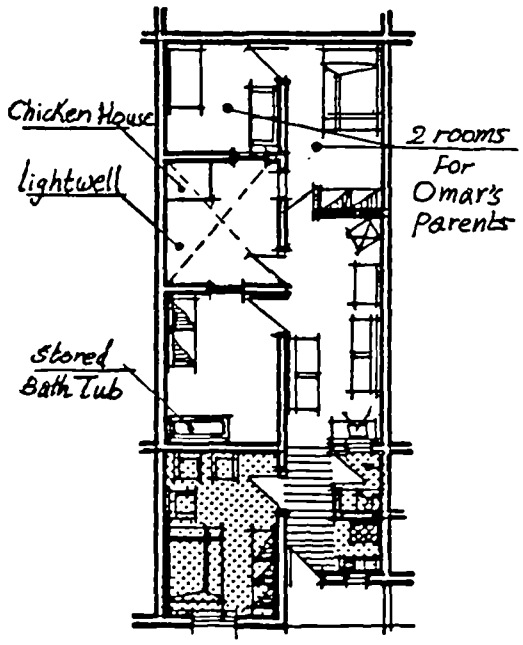
In the whole of the sample there is only one

Fig 7.12. Ramy's House.Case 42.

case of a landlord sharing both the same access and facilities with his lodgers, and that is the case of Ramy ( case 42, Group B) . However, the lodgers in this particular case happened to be two female workers who are employed by a private factory. Being female themselves they do not present any threats to the privacy of landlord's female family members. (See Fig 7.12)

However, it is common in TORCHS, among the owners. to let out an entire section of the house to different households who would share the available facilities amongst themselves, as in the case of Gerges , see previously described case 48 , third floor, (see Fig 7.10).

In the case of extended families living in the same house there are two different types of arrangement. The first is when the ownership of the house is shared among the different members of the family and the second when the relatives are being housed for either social or economic reasons. Such arrangements depend on the actual financial agreement between the host household and relatives living with them. Examples are 1. an unmarried sister who lives with her brother, 2. parents living with their son because their house has collapsed or 3. because a brother has moved in with his elder brother whilst looking for a job in the Tenth of Ramadan. In all of the above cases the relative who is being housed does not have any claims over the house ownership. The relatives, in such cases, would be using the same facilites as the owning household.




They could be offered a section of the house which would be exclusively reserved for their use as in the case of Omar, ( Case 44 Group B ) where the two back rooms belong to his parents. His wife and children are not allowed access without the parents permission.

Fig 7.13 Omar's House. Case 44.

Alternatively the relatives could sleep and use the same rooms with the host household as in the case of Attia (case 21,Group A ) where his mother sleeps with the children in the same room.

Meanwhile in the case of shared ownership each household is more likely to enjoy separate facilities of a kitchen and bathroom whether there is a separate access or not.

In the case of sons or daughters marrying in the same house, every effort will be made to ensure that they have their own facilities and separate access into the residential unit. The more independance given to the looks of the house for the new couple the better. This is to avoid any sources of unhappyness or disagreement and conflict between the spouse of the son or daughter and his or her parents. It would also help to avoid disagreement over inheritance rights concerning house ownership in the event of the death of parents.

It was noticed that in the cases of sons or daughters living with parents that a kitchen was more important to have a their own, than a bathroom. The reason behind this is that the two households would cook separatly and thus having different kitchens would minimize the possible misunderstandings which could easily arise between the sons wife, for example and her mother-in-law.

This is partially because of the traditionally fragile and rather explosive nature of the relationship between mothers and daughters-in-law. Underlying this dilemma is the fact that food, in the Egyptian culture has always been considered as a family secret and in this case sharing the same kitchen could expose the economic situation and priorities of expenditure of the newly formed household. This in turn could open the door wide open for criticism and hence conflicts between the parents on the one hand and the son's wife on the other.

An example of this is the case of Taher (Case 43, Group B ) and the case of Sameh ( Case 52, Group B ). In contrast, when a daughter moves in the same house with her parents as in the case of Kidr ( Case 41, Group B ), there is no urgent need to provide her with a separate kitchen even though she would be cooking separately, as no conflict is likely to arise from her sharing the same kitchen with her mother.

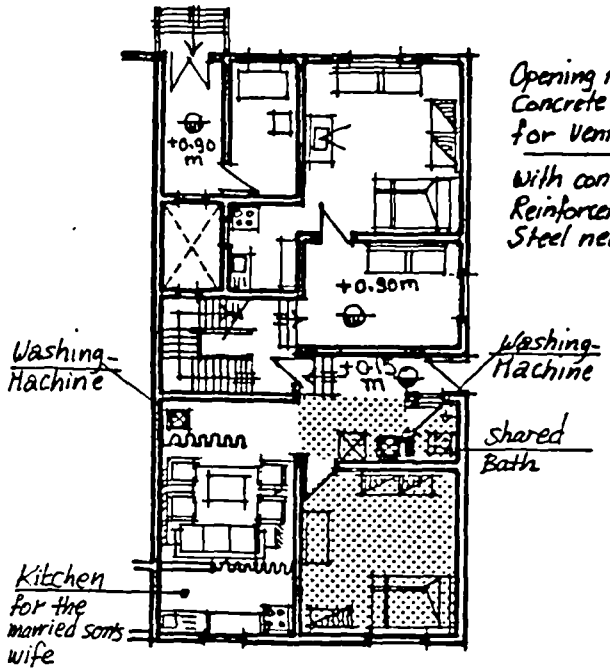



Fig 7.14
Taher.Case 43.

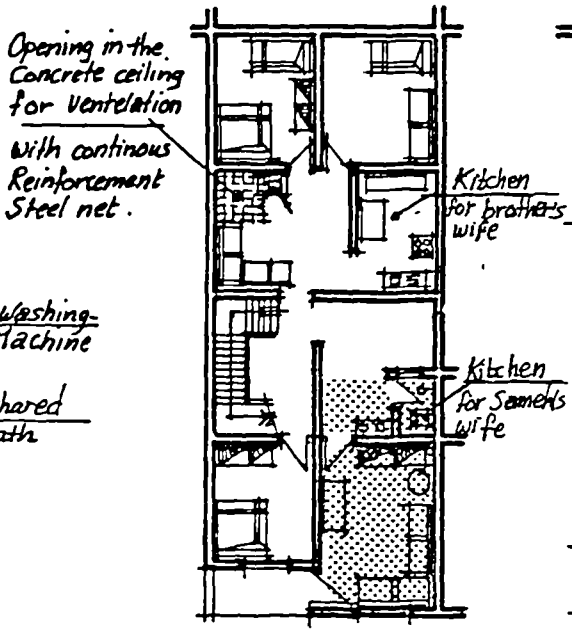



Fig 7.15
Sameh. Case 52 .

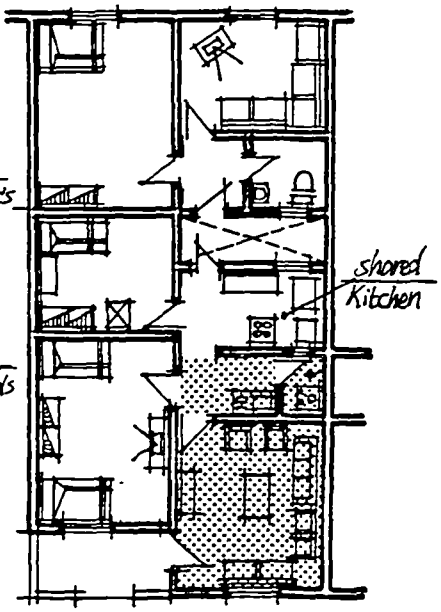



Fig 7.16
Kidr.Case 41.

### 7.3.3 Self-Expression.

Self expression is another side of the same coin concerning the search for quality. One can detect that self-expression is the main motive behind some of the TORCHS household's choices. Decorative plastering and painting of the external walls or decorative brick fences are some of the results of self-expression. The planting of trees or the erection of wooden pergolas for climbimg plants are other means of self-expression.

In a particular case that of Ikram, Case 17, a climbing plant had been left to cover the whole facade of the house including the chicken houses built on the roof. The plant was rooted in the vegetable garden in front of the

Picture 7.1 Ikram's Climbing Plant.

house and which was separated from the house by an access path. So the plant had to be directed towards the walls of the house by means of a network of strings creating a type of hanging enclosure. This had been a task which had required much care and patience by Ikram and his wife.

No other economic, social or even environmental explanation justified their feelings towards this plant. All that could be stated here is that the plant and the trouble of growing it and caring for it and what it represented to them, summed up their desire to achieve a better quality of life.

The problem in a scheme such as TORCHS is that such means of self-expression and personalisation are not always, if at all ever, appreciated by the authorities. As a matter of fact many of the TORCHS users attempts to personalize their environment are disapproved by the local authority and was viewed at best under "disliked" or "bad taste".

## 7.4 User's Strategies to Overcome the Constraints of Choice.

Constraints of choice which directly influence user's decision making are financial by nature coupled with the type of initial provision and knowledge of the incumbent constraints.

In the following part of this chapter the strategies which households in TORCHS have employed to counteract the various constraints will be discussed and evaluated.

### 7.4.1. Users' strategies to counteract financial constraints.

The financial limitations and user's affordability is one of the most obvious constraints which form the limits to ambitions and expectations of people. However the financial limitations are not as sharp cutting as one might think.

What people have sometimes achieved in the case of TORCHS would seem beyond their affordability limits. This is the result of certain strategies which low income households tend to employ. One could regard them as some kind of improvisation in the use of available but limited resources as well as the generating of additional income. The following analysis describes some of the tactics, methods and strategies which the users of TORCHS employ in order to extend the limits of their financial limitations.

#### a. Auxilliary Resources.

In TORCHS, especially in the case of owners, the contribution of auxilliary resources towards the finance of

the extensions was found to be even higher than that of the case of the multi-storey extensions in the Helwan Economic Housing in the first case study.

This is because in the case of TORCHS the situation is more legally secure . Extensions in TORCHS are also larger than in the Helwan multi-storey cases, henced more finance is required as well as reliance on auxilliary resources.

However the type of auxilliary resources which TORCHS households rely on are almost similar to those in the case of Helwan multi-storey extensions.

Table 7.2 illustrates the types of auxilliary resources which TORCHS households were found to be relying on.

| DIRECT | | INDIRECT |
|---|---|---|
| Self-finance | Credit | |
| Remittance money. | Savings Clubs. | Building and finishing skills. |
| Tangible assets: Jewellry, or Property. | Borrowing from relatives and and friends . | Cheaper access to materials and transportation. |
| Extra working hours. | Credit from contractors. (Occasional) | |

Table 7.2 Auxilliary resources in TORCHS.

An example of remittance money contributing to the finance of extensions is shown in the case of Mostafa ( Case 32, Group A ). Mostafa has worked in Iraq for three years before coming back to Egypt with savings in the region of L.E

10,000. A great deal of this money was absorbed into the financing of the extension.

An example of a wife selling her jewellry is the case of Sameh ( Case 52, Group B). Samya, the wife of Sameh, had to endure a great sacrifice by selling all her golden pieces of jewellry. Her bracelets fetched around L.E 2,000,all of which was put into the extension.

As for selling property Gerges case ( cae 48 ) is a good example. As he had mentioned, he had sold a parcel of agricultural land of about two acres, in his home village, left to him by his father. Gerges did not say how much he received for the land but assuming a reasonable location and soil fertility he would have got between L.E 10,000 to L.E 15,000.

Another important source of finance which was found in TORCHS was the selling of a part of the plot to relatives, usually the part at the rear which does not contain the core house. The money made out of the sale is used to build extensions. This took place in the case of Senan ( case 51, Group B ). Senan bought half of his cousins plot. His cousin then used the money to finance his own extensions. This particular plot happened to have two aspects (back and front). The two (half) plots are being developed entirely separately.

The building skills which people have are limited. People sometimes have some command of brick laying and carpentry. In one particular case, Mohammeden, ( case 11, Group B ) had the skill of building with mud. Somehow he

discovered that the soil in the Tenth of Ramadan was suitable for building if mixed with straw and water. He built the walls of his two roomed extension using the same technique of mud construction which he learned as farmer. He dug the soil out of his own plot thus saving labour and material costs entirely.

B. Income Generating Activities.

Income generating activites could be considered as one of the important auxilliary resources which contribute to the finance of extensions. The income generating activities are motivated by the need to finance the extension as well as the need for the additional space.

Income generating activities include the letting out of rooms, running a shop, growing vegetables, keeping chickens and live stock. All these activities require space from buildings except in the case of vegetable growing. If the profits do not directly contribute to the extension costs they contribute indirectly by cutting down on the costs of living in general. This allows other resources to be directed towards the finance for extensions.

The case of Attia, ( case 21, Group A ),is an example of direct financing of an extension from an informal income generating source. Attia's house consists of two roofed rooms in addition to the room of the initial core house. Three other spaces (rooms) are brick walled but not yet roofed. One of the roofed rooms is utilised as a shop.The family consists of

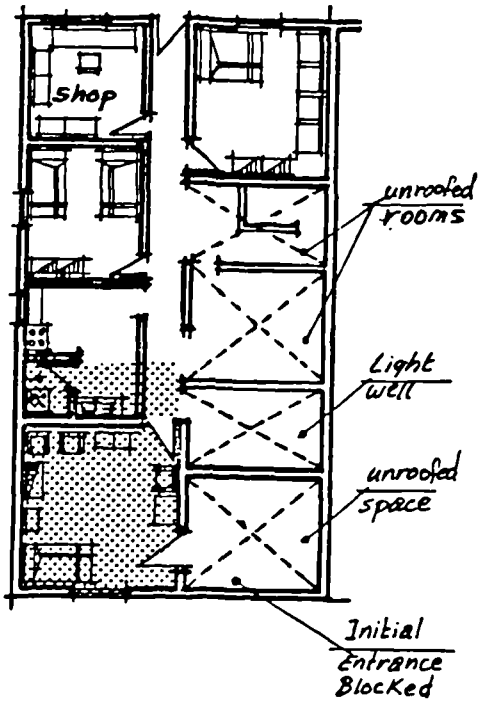



Fig 7.17 Attia's house.Case 21.

his wife and four children in addition to his mother who is permanently living with them. The whole family and mother live in the two bedrooms. When asked about the contribution of the shop to the household income he said "Without the shop we could hardly live, never mind about completing the rest of the extension; all my four children go to school and three of them receive private lessons which cost me a fortune each month ( L.E 60.00 ). This is half of my salary. How could I feed and dress them with just 60 pounds."

Clearly, in this case, the shop and the profit generated from it, is helping towards the households living costs and eventually the construction costs of the extension.

One the other hand, Safwan, ( Case 34, Group B ) is an example of income generating activities starting after the completion of the extension or at least the present phase of the extension. In this case after finishing the construction of the ground floor extension the initial core house was let to a family who are paying Safwan a monthly rent of LE 45.00. Safwan's wife claimed that they wanted to help those tenants

because they were unable to find any suitable accommodation in the city which they could afford. Clearly there is a mutual benefit in this case for both households.

As mentioned in Chapter six, it was found that in the case of the owners, the amount of income generated by those activities correlate negatively with the share of the regular income per member of the household. So the less the share actually is, the more are households likely to find another source of supplementary income. However there are few opportunities in the Tenth of Ramadan New City to find part time employment. Unqualified women have difficult chances of finding employement in the New City.In both cases this would have been much easier if they had been living in the older parts of the city or even in rural areas.

As shown in Chapter six the majority of the wives in TORCHS are illiterate with no particular training. If living in a village it would have been normal and expected for a wife to perform certain tasks and which contribute to the household income which she could easily do by rearing chickens, doing seasonal farming or giving a hand to her husband in the fields or preparing and selling dairy products. Likewise if the household was living in an older urban area many wives would have the opportunity to get cleaning jobs or child minding work.

However living in a small community such as the Tenth of Ramadan such activities for women carry with them a stigma. Working in other peoples houses is not thought well of and could be used as a bullying factor within such a small

community. Um Hamid ( Case 23,Group A ) is an example of a wife from rural origin who is not satisfied with her life style in TORCHS . Her main complaint is that she cannot practise the activities she was used to when living in the Delta villages.

In her own words Um Hamid expresses herself by saying: "I am not happy here, I would like to go back to "El Fallaheen" (a word describing peasants and their environment), there I had a cow; we always had plenty of thick milk, which we cannot buy here and if you could find it, it would be very expensive. I left it ( the cow ) for a cousin to look after. If I brought the cow here everyone would laugh at us. They would say "look those Fallaheen peasants sleeping with a cow in the same house."

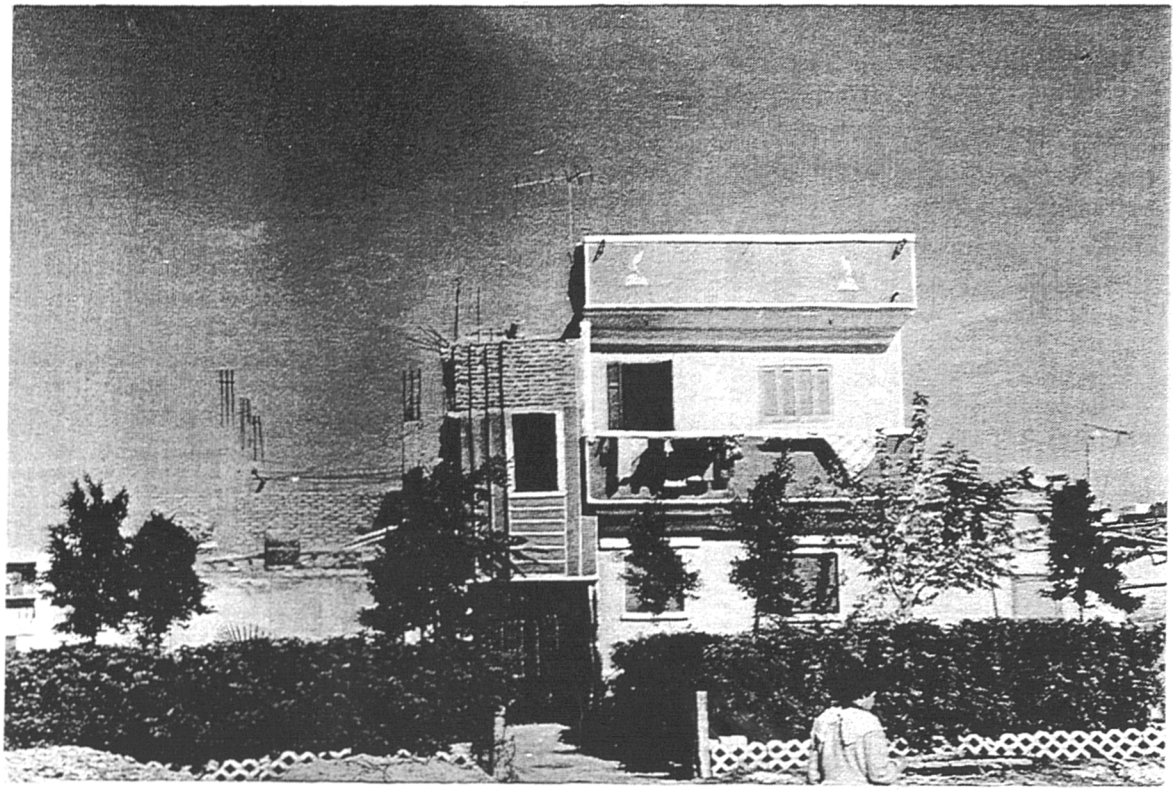
In contrast to the Um Hamid case above, there are other wives who could easily find employment in the Tenth of Ramadan. Those are the trained and educated wives, which are not very numerous. An example is a primary school teacher Sohair ( case 36, Group B ). Sohair is not only teaching at the neighborhood primary school but she also gives private lessons to the children in the afternoons. This practise is quite common in Egyptian society that a teacher would give informal private lessons to her same day pupils to substitute for the weak educational standards provided by the schools as well as to supplement his or her own income. When Sohair's house was visited at two o'clock in the afternoon there was a group of four children receiving a private lesson in arithmatic.

C. The Exploitation of Influence.

The exploitation of influence is a frequently encountered strategy in Egyptian society. Although it may sound as a Machiavellian sort of behaviour it happens all the time on different political levels and in different forms. It is not the purpose of the author to judge the morality of such behaviour but only to report it as a strategy with TORCHS residents use to help them execute their extension work. Generally speaking it is a strategy for making things easier or cheaper to get.

An example of this can be found in Gerges's case ( Case 48, Group B ). Gerges has employment as a driver of a rubbish collecting lorry for the local authority. Gerges has used and still uses the lorry to carry building materials which he finds or buys, such as a bag of cement. Although this behaviour is against his job regulations he did not seem to be very concerned about the illegality of the case. According to his point of view he is not doing any damage to the lorry and it saves him a great deal of money.

Another example could be found in Sobhi ( Case 46, Group B ). Sobhi, who is working in the local authority, has managed to aquire some free cement bricks. According to him they were left-overs from roadworks. Sobhi also managed to get small trees and plants from the local authority in order to plant them in his garden. Sobhi used the cement blocks to build a decorative wall fence to surround his well looked-after and relatively large garden. (see Picture 7.2)



Picture 7.2 Sobhi's garden.

Generally speaking, the cases mentioned above have achieved a lot out of a relatively minor exploitation of influence. The loss of a few cement bricks could be of no importance to the owners in question, (The Local Authority). Whilst it no doubt has meant a great deal to Sobhi, and few kilometers more or the lorry's kilometer would not cause any concern for alarm.

### 7.4.2 Transformation of the initial government provision: the constraints and mismatches.

There were three levels of constraints and decision making which the users had to contend with in order to satisfy their varying requirements of living and working. These are as follows:

1. CORE HOUSES AND PLOT. The constraints of the core house design and construction related to further sub-division into habitable rooms,through deciding on the position and dimension of internal walls,kitchen,washing and sanitary facilities, ventilation, internal circulation, and private outside space within the plot. From a technical point of view the nature and type of foundations on which the initial provision was built also had constraints and limiting operational parameters for further additions by the users.

2. PLOTS AND BLOCK. Plot constraints concerning the width and depth of the plot and the position of the initial provision in the plot were the major influence on the options which people had in deciding on their course of action for their extension work. Other factors such as the position of the plot in the block, access possibilities, orientation and infrastructure provision were further constraints which the people had to deal with.

3. BLOCKS AND NEIGHBOURHOOD. The resulting public spaces created by the position of blocks in the context of the neighborhood as a whole giving rise to street layout and traffic network, land uses and pedestrian circulation constituted a third constraint for the residents of TORCHS.

The users' strategies for overcoming these constraints and mismatches are detectable in their continuous and relentless efforts to transform their core houses, residential block and direct dwelling environment. The changes which the residents have made are both physical and functional on all three levels.

A. Constraints in the transformation of the core house and plot.

The core house design has proved to be inappropriate to the users socio-cultural needs. The relationship between the initial provision as planned and the extensions did not offer the users the required privacy.

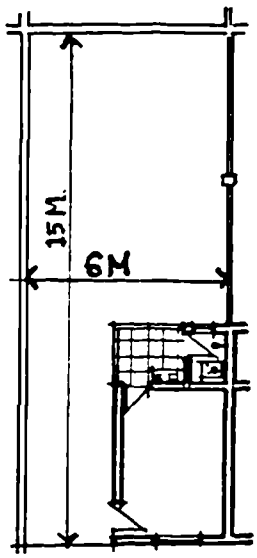



Fig 7.18 Core House Type B.

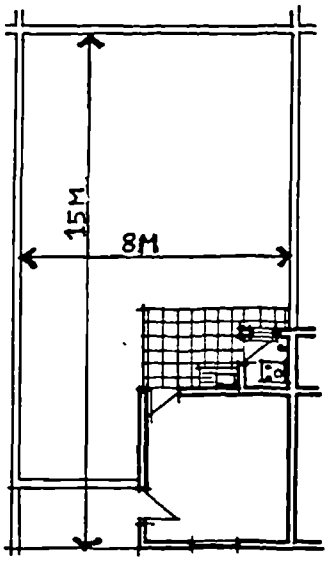
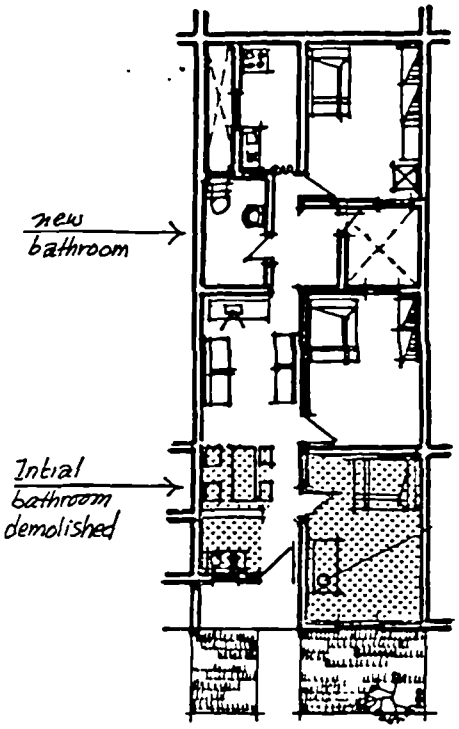



Fig 7.19 Core House Type D.

Circulating from the front position of the core house, kitchen and bathroom/wc area through an open courtyard to reach the newly built rooms at the back of the plot. This means that an open view is offered from the first floor of the adjacent properties to the activities of the household going from rooms out into the open space and into the wc, bathroom or kitchen area. This especially is culturally unacceptable concerning the female members of the household. The planned courtyards were frequently replaced by a hall which serves both as a living room and as circulation space.

Nevertheless, because the proposed courtyards were meant to provide ventilation for the sanitary core, the hall addition frequently led to the sanitary areas being unventilated. In the cases of the wider plots (C and D type) which are 8 metres wide instead of the smaller 6 metre width, the extra width allows the provision of a light well next to the wc without jeopardising the ability to subdivide the remaining area in a culturally satisfactory manner.

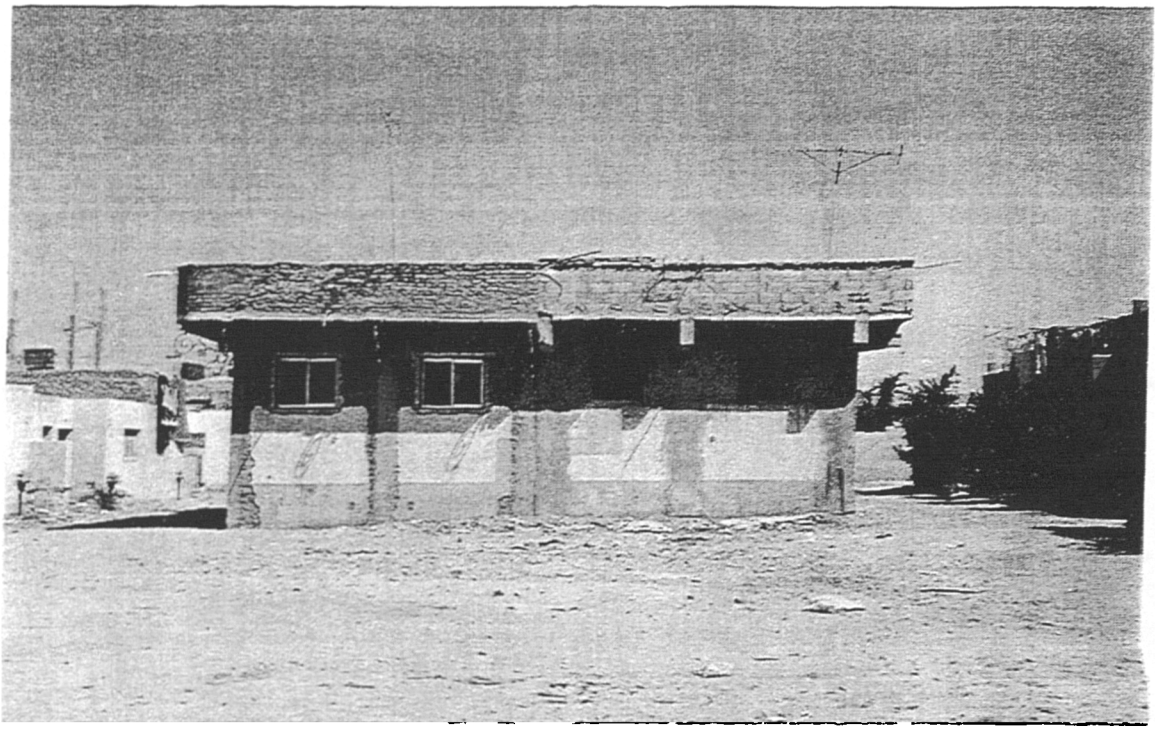
In some cases in the 6 metre plots, the wc provision was demolished and rebuilt further down in the plot. These householders declared that although they felt it would be a financial loss for them to demolish the entire core house, it was essential that they at least demolished the toilet area because of the ventilation problem and because they did not approve of its location near the entrance. An example of this is Walid Case 29, Group A.




.Fig 7.20 Walid's House. Case 29.

The construction of the core house itself was also inappropriate. The load bearing brick walls and concrete roof structure was not strong enough to support the the weight of

another floor above and certainly not that of another two floors. Many users therefore had to avoid building on top of the core house or to strengthen the core house structure by the erection of concrete columns, retaining as much as possible of the initial structure ( see picture 7.3)



Picture 7.3 Concrete columns prepared for first floor.

B. Plots and Block constraints.

In terms of size the provided plot areas do not represent absolute constraints on users freedom of choice. It would be unfair to describe such areas of 90, 96 and 120 sq.metres as " too small " or " too large ". Compared to what is available on the informal land market these areas are middle ranged. However, the plot areas represent real choice constraints when other limitations are introduced. These limitations in the case of TORCHS include the building regulations governing the permissable number of storeys, and

the open areas required for ventilation and natural daylighting purposes. Coupled with these constraints is the design, position and dimension of the core house, which covers one quarter of the plot area and occupies the front area of the plot. The plot dimensions and shape - especially in the case of types A and B - are in a width to length ratio of 4 : 10, with the imposed building regulations as well as the existence of the imposed core house represented a very difficult design problem which was left for the user to solve.

The whole block of plots constitute a severe restriction on building activites when it comes to standards relating to ventilation, privacy, public access, natural daylighting and infrastructure services.

In spite of these restrictions the extensions in TORCHS present a wide variety of solutions. One of the particular devices which users have developed relates to the ventilation problem as shown in Picture 7.4 where a small rectangular area in the roof has been covered with reinforcement bars to allow the room to be ventilated. During the short and very light rainy season in the winter months the reinforcement is covered with a plastic sheet or large plastic carrier bags.

### C. Transformation of space between Blocks in the Neighborhood.

Whilst discussing the levels of Core house and Plot, Plots and Blocks and Blocks and Neighborhood horizontally,as it were, there is also the vertical relationship of

interaction between people and the built environment on all levels. As the arrangement of space and material on the plot and block level lead to various qualities of life so does the interaction between people and space in the public spaces of the neighbourhood.

The success of space becoming alive is the degree to which initial provision answers peoples requirements at all levels. The success of public space and urban articulation into alleys,main streets, cross streets, squares, forecourts and pedestrian and traffic routes largely depend on their ability to to serve particular communal economic, social and cultural requirements. Public spaces become alive,as do on-plot spaces, not only through being used for what they were made for, but also for people to add, change, embellish and adapt in a way that turns space into place. "Becoming alive" is the same quality which distinguishes between a "hole" in the wall and a "window place" as identified by Christopher Alexander, (Alexander, 1979 pp 111).

Becoming "alive", as introduced by Alexander, does not depend on the " human purpose " behind the creation of a space but on the space's own " intrinsic stabilty ".

However that does not exclude the usefullness of a space to human endeavour with respect to change, add and adapt it, as an essential part of its quality. Indeed intrinsic stability is seen as an understanding of requirements, at the levels described above, and meeting them with the right designs, so as to provide the context for action and developemnt by those involved in the housing process.

The provision of public space which meets the public's requirements encourages maintainance, care and above all action by members of the community for the benefit of the community itself. Quality in the neighbourhood and indeed in the block and the plot is related to the intrinsic stability set up in the dimensions and positions of the elements in the respective levels described above.

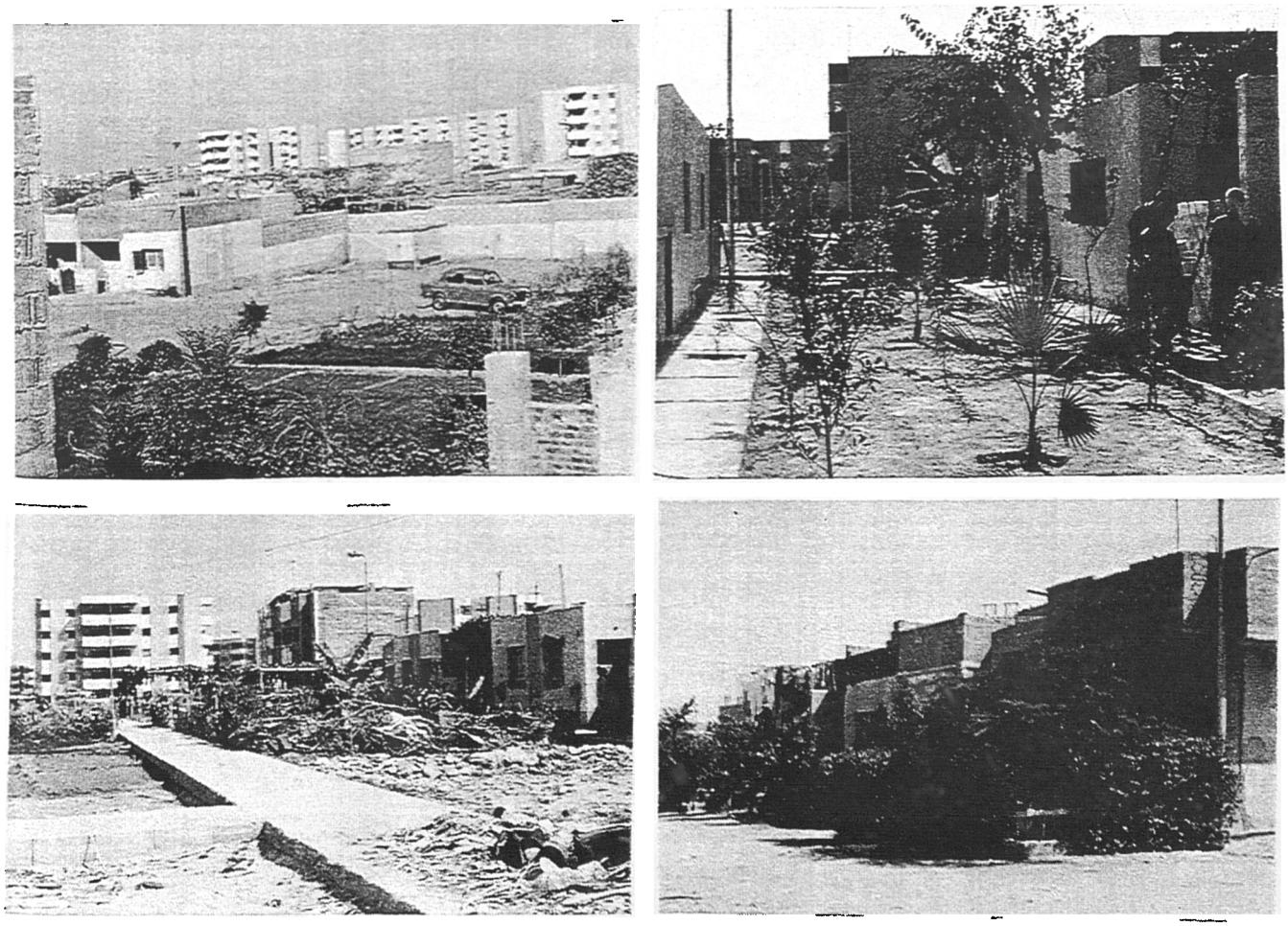
TORCHS public space and TORCHS block and plot arrangements are merely more examples to be added to the world-wide number of case studies which have helped to illuminate and veryify this theory because of its negative results.

Based on TORCHS case study one could say that users have always been motivated by the desire to make public open space useful and beautiful but this desire has been thwarted by the ill design of the neighbourhood making it difficult to make spaces become alive.

In TORCHS all the reasons of public space provision, such as social gathering, children's play and green areas can be challenged. The intended green areas never became " green " mainly because the authorities do not have the resources to plant or maintain them. But neither was the " intrinsic stability " and perhaps more importantly, the political will, there in the first place to generate local interest to do it naturally. Therefore public space has usually turned into unshaded, sandy and deserted hot open space discouraging children'play and in addition where garbage and domestic waste has been allowed to accumulate.

TORCHS users in responce to this desert-like environment of negative public space, have replaced where possible, the unused open areas surrounding their plots with small private gardens. Here they grow vegetables and climbing plants such as vines and loaf plants and trees. Through this activity, the outside areas are made more hospitable and safer for playing as well as helping towards lesssening the bill on food expenditure. Shade and privacy are also provided which contribute towards better conditicns outside the house.

The gardens are a particularly important addition to the cultural life of the inhabitants. They are either used for sitting out only or for vegetable growing or both. Fences and



Examples of private use of public space for recreation and income generating activities.

hedges provide visual privacy to the wife, who was usually responsible for vegetable growing, thus screening her from curious eyes whilst working in the garden.

### 7.4.3 Overcoming the constraints of available knowledge.

Designing and building ones own extension are tasks which require some skills and experience. Many of the residents of TORCHS had never gained this experience. The majority of the households in the sample had been tenants, previous to coming to the Tenth of Ramadan New City, and therefore had no building experience. Those who did have experience and knowledge of building had come from rural areas where they already owned a house and had had to maintain the building and carry out minor building works to their property. Also in many cases the house had been built by them and changed and modified over time in some way or another.

#### a. Methods of obtaining information.

The residents in TORCHS have their own methods of obtaining the required information which could help them to perform building tasks as efficiently as possible. With the complete lack of involvement from the local authority's side concerning design and technical aspects the users had to either depend on themselves or pay for advice.

Self reliance meant using informal networks for information whilst pay for advice would bring in building labourers and small contractors or even some draughtsmen.

The informal network involved two approaches; the first is an explicit statement concerning the need for information usually gained from relatives or from a father, brother or cousin . The second approach actual opinions or direct advice is rarely asked. Information is gained in a very sublte way for example in Safwan's case no.34 and Ahmed's case no.49 (see Figs 7.21 and 22.)

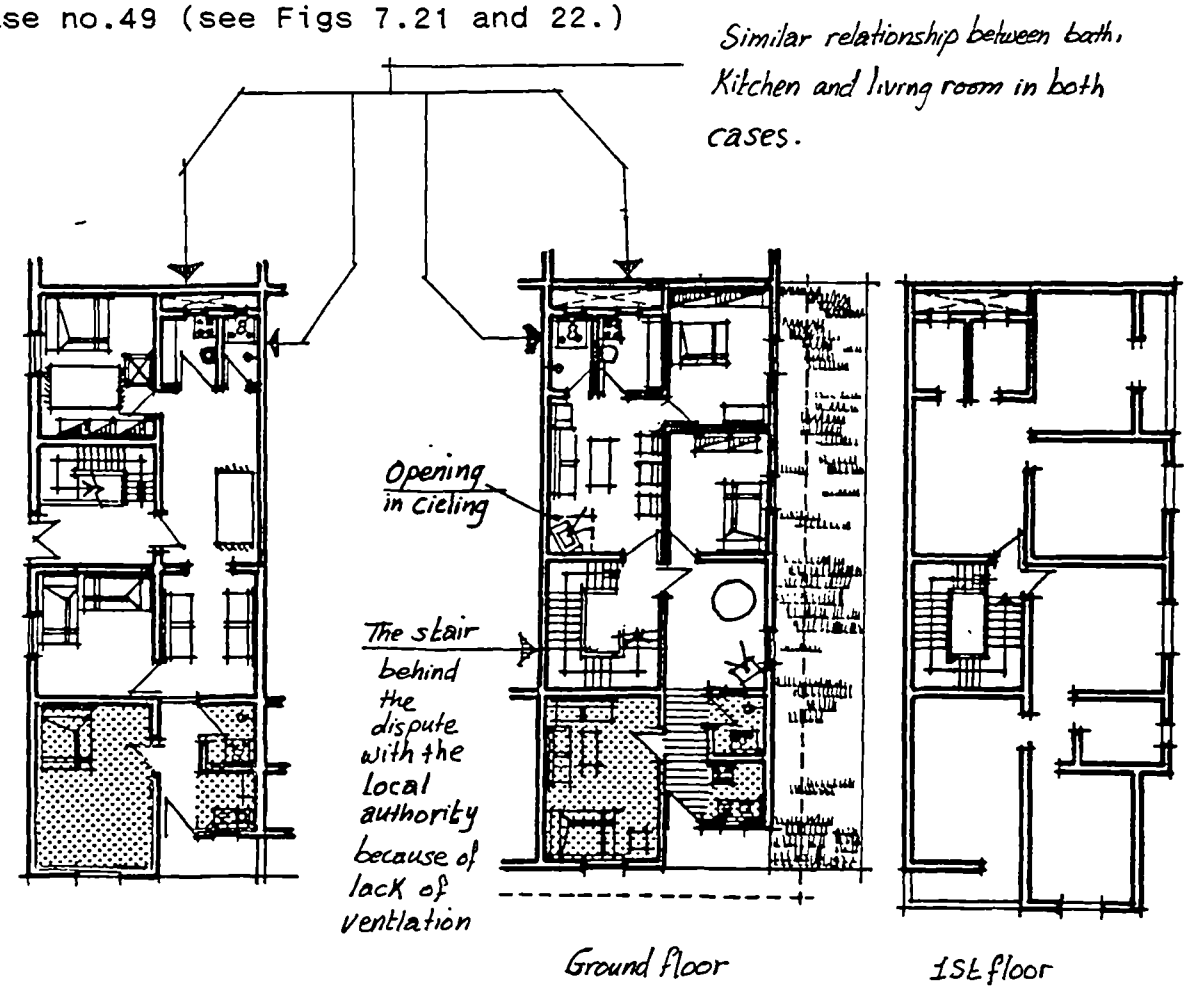



Fig 7.21
Safwan' House. Case 34

Fig 7.22
Ahmed's House. Case 49.

Ahmed and Safwan are long time friends, workmates and neighbours even before moving to TORCHS. They have been working in the same factory for years and were living in the same neighbourhood in Cairo before moving into TORCHS. The two wives are also long time friends. Ahmed built his ground floor extension about two years before Safwan built his. One

can easily recognise some similarities between the two extensions and also some differences. However the new kitch-bathroom areas in both extensions are very similar. As a matter of fact the relationship between the hall, the kitchen, the bathroom, the bedroom and narrow lightwell at the rear of the plot are not only the same but they are both unique among the fifty two plans.

When Safwan's wife was asked whether they had consulted Ahmed concerning their extension she said, " No ", my husband did the whole arrangement himself but Ahmed did give them some advice because he had built his extension first. Safwan's wife also insisted that the two house are also completely different. However Safwan himself did say that he had learned a lot from Ahmed's mistake especially regarding the staircase which had saved him a lot of trouble from the authorities which Ahmed had gone through.

b. The disadvantages in the informal network.

Relying un informal networks has its disadvantages and weaknesses. These could be summed up as follows.

1. The time factor and efficiency.

In the informal networks time plays an important role in the improvement of the quality of the available information or the establishment of knowledge. This is because time is required in order to accumulate enough experience which in turn verifies the information and also makes it more relevnant to the task in question. For example users who build their extensions first are likely to make more

mistakes than those who build later on. This was clearly demonstrated by Safwan avoiding the mistakes of Ahmed regarding the position of the staircase in the plot.

2. Size limitations of personal networks.

There is usually a limited number of personal aquaintances which a person is familiar with to be able to benefit from their experience. From this limited network the user has to select an appropriate solution to his or her problem. The limited network excludes a variety of other possible solutions simply because he or she does not know any more people.

In TORCHS, forty five among the fifty two sample households have never been inside more than three houses in the settlement ( other than their own ). Generally speaking women have a greater chance of visiting neighbours houses than men. Hence women are more familiar with other ideas and designs which they pick up on their social visits

3.Situations of misunderstanding or misinformation.

These situations are likely to occur between users and paid expertise which people hire, usually a small contractor or construction labourers. Misunderstandings occur because of the inability of people to communicate properly and misinformation arises when hired expertise have undeclared vested interests.

An example which reflects a situation of misunderstanding is that of Ghabour ( case 50 ). He had a rather complicated demand concerning the design of his two storey house. The ground floor was designed to be let out to lodgers who share two bathrooms and a kitchen among themselves. Since the plot had two free aspects Ghabour wanted another access as close as possible to the staircase leading to the first floor. The first floor was meant to be divided into two flats. Naturally each flat would have to have its own facilities of a kitchen and bathroom. One flat was meant to be for Ghabour nand his family and the other for his son. However somewhere during the discussions communicating his requirements to the contractor a misunderstanding took place concerning the location of the

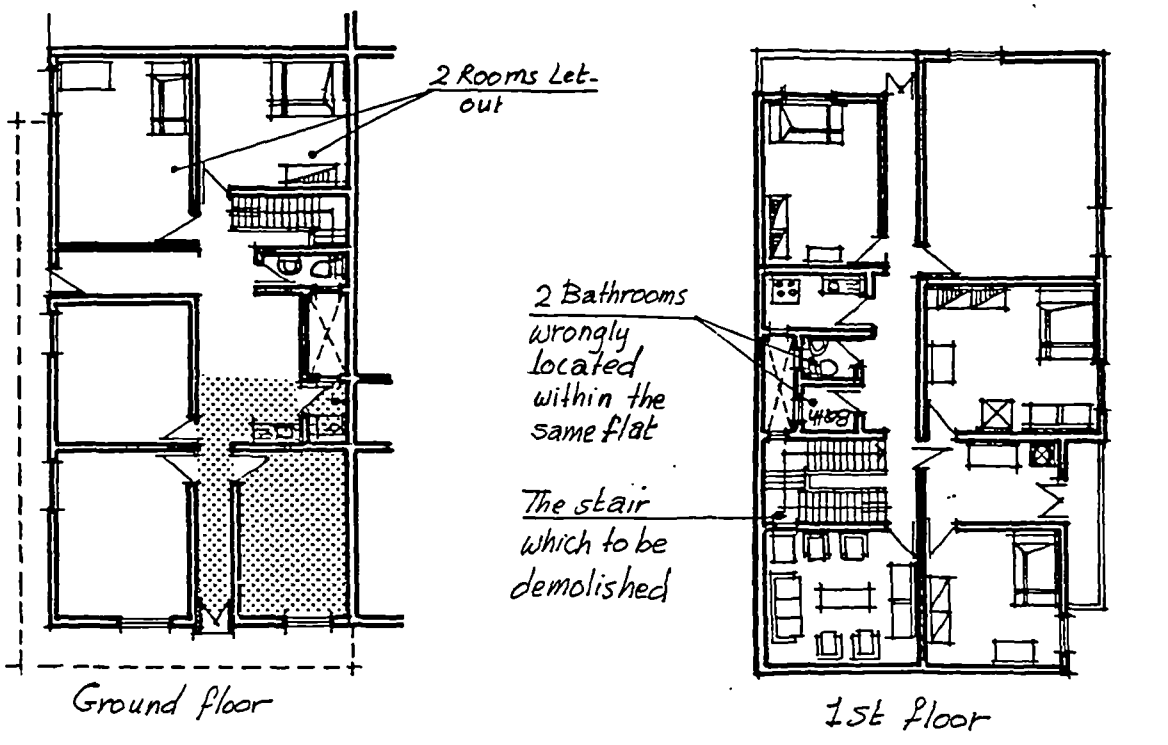



Fig. 7.23 Ghabour's House. Case 50.

facilities. What actually got built was one first floor flat with two bathrooms and a kitchen, while the other has no facilities at all.

In trying to establish how the misunderstanding arose was not easy. Ghabour has insisted that he had explained very clearly to the contractor what he wanted and that they agreed on the position of the staircase and the need to located kitchen and bathrooms against a light well rather than on one of the free facades.

Ghabour added that during the construction he and his family moved to live with his father in Cairo. Ghabour came as often as possible to check out the development of the construction. When the building was in the concrete skeleton stage nothing seemed to be amiss. The mistake was discovered when the builders came to build the walls. In Ghabours case a partial demolition and reconstruction of his extension is inevitable. He was going to carry out the alterations as soon as he could afford to.The following is a good example showing a case of misinformation.

Rezek was not included in the 52 household sample. However during the third visit to Ahmed's house, Rezek was introduced to the interviewer. Rezek is a neighbour living a few doors from Ahmmed's house and works for the same company called 'Arab'. Rezek had just demolished the entire core house which he and his wife and two children had been living in for the last two years. During the demolition, Razek and his family were living in one of the two rooms of Ahmed's

house. The construction of his new house was delayed because of a disagreements between Rezek and his wife on the one hand and the contractor, who they had hired, on the other.A line drawing plan was presented to the interviewer (see fig 7.24a)

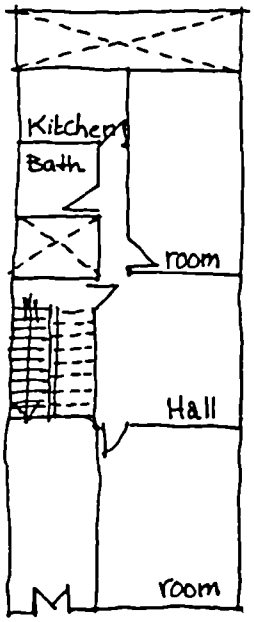



Fig 7.24a
The contractor's design for Rezek's house.

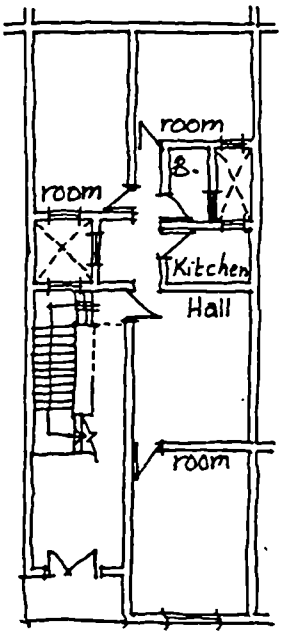



Fig 7.24b
The alternative for Rezek's house.

The objection of Rezek's wife to the plan was that the ground floor had only two rooms and a living room. She was quite certain that the plot could accommodate another room. She explained that two of her neighbours have three rooms and a living room, with some rearrangement of the services. To this the contractor replied that if he did as she wished they would be limited for variuos reasons in the

planning of the first floor. Looking at the plan the contractor's argument seemed weak. However together with Razaz' and his wife another plan was developed which they seemed to like, see fig. 7.24.b

In this case the contractor has some reason to misinform the client; either he did not know himself how to redesign the house or he did not want to waste more time over the design.

All of the previous discussion and examples were introduced to demonstrate the impact of the constraints of knowledge on TORCHS users decision making process and hence on the quality of the built environment. However this has not meant to mean any underestimation of the value of the informal networks of information or in any way to discredit tbis system. On the contrary such networks are very important to the success of any self help scheme. It is always necessary to understand how they operate, their strength and weaknessess and how they could be improved.

## 7.5 Summary

The purpose of this third level of investigation was to explain user's choices. It has also tried to challenge the viewpoint of the Eyptian authorities that poor the can make no improvement to the quality of the built environment in aided-self help schemes but only turn them into slums and areas of very down market environments.

Seven main facts emerged from this level of investigation.

1. What TORCHS user's have built constitutes a wide variety of standards and design solutions. This reflects a rich mixture of people with different priorities and social, economic and cultural requirements. Some of the extensions which have been built, especially those which belong to group B, have required extremely large investments and have produced houses which easily meet and often exceed the standards of the middle income housing group in every respect. The less costly extensions have turned out not to be poorer in quality either in their constructional or environmental aspects.

However, it is in the Group B houses, with the larger investment, that design problems are more frequently encountered. This is because in this group a subdivision of plot takes place both horizontally and vertically. Also in this same Group problems of ventilation are encountered more often than in Group A.

2. It has also become clear from the TORCHS case study that although financial circumstances have mainly influenced houshold decision making, the outcome of this influence has varied greatly from one case to another. This is because the economic logic which each household might use to weigh the costs and benefits of its decision is continuously subjected to the influence of a mixture of social and cultural obligations and requirements and individual perceptions of priorities and compromises. Thus the use of user's affordability as an indicator for determining the rate and size of development in any self help scheme would be misleading and incorrect.

3. TORCHS users have managed through their own individual approaches to counteract the constraints of choice and in many cases to change the prevailing mismatches between provision and requirements into their own benefit.

TORCHS experience has proved that even when the layout is pre-determined, when the users take control they can re-plan the whole settlement through their own actions. They can alter the street patterns, the land uses and the imposed building and space standards which suggests that it would be more realistic to involve them in the planning of their settlements in the first place, rather than imposing a plan on them and expect them to conform to an anticipated set of preconceived circumstances.

4. The area as a whole has a positively growing and changing character with a strong development in a self-recyling economy. This, in particular, could help to set a positive example of independence and self-reliance. The settlement is continuously and positively consolidating its socio-economic structure. These factors are borne out by the way the neighbourhood is consistantly attracting new settlers. For example in the 20 houses which belonged to Group B lives 57 different households. This means almost three times the planned densities. In a New City where entire neighbourhoods remain empty this fact makes TORCHS stand out as a success.

5. TORCHS users efforts in trying to overcome the limitations of uniformity and the standardisation of the initial provision have led to some negative results such as poor ventilation in some cases.

However such negative results should be conceived as a direct result of the unsuitable initial provision and its ability to accommodate the existing variation among the profiles of the residents. Thus the negative results should not be regarded as the outcome of a free made choice by the residents.

6. In the case of TORCHS the women play a very important role in the finance of the extensions by

making the costs of the extensions affordable through economising in household expenditure and also by sacrificing some of their precious belongings. Activities such as chicken rearing, pigeon keeping and growing vegetables which are all practised by women to help to reduce the household expenditure on food allowing more financial resources to be available for other purposes and especially for the building of extensions. The women also showed a remarkable interest in the actual design and they were more knowledgeable than the men about the design of extensions.

7. A great deal of improvement however could be achieved through improving the decision making process by eliminating or reducing the influence of the choice constraints. In particular the constraints of choice relate to the initial provision and the available knowledge and advice on the planning, design and building process.

References.

Alexander, C. (1979) The Timeless Way of Building. Oxford University Press,New York.

PART 3

# CHAPTER 8

## Research Conclusions and Implications

8.0 Research Conclusions and Implications.

8.1 Evidence from the two Case Studies.

8.2 Compering some of themes of the Organisational Frameworks of the two Case Studies.

8.3 Review of the Study Hypotheses.

8.4 Lesson Learned from the Two Case Studies.

8.5 Implications of the Study.

8.5.1 Policy and Management Aspects.

8.5.2 Design Aspects.

8.6 The Next Steps.

## 8.0 Research Conclusions and Implications.

The conclusions sum up the evidence which broadly confirms the viability and potentiality of a housing policy that plans for user intervention in public housing in the Egyptian context and in particular in self-help in Egypt's New City Settlements . The scope of the conclusions is limited to this objective.

The general conclusions are drawn directly from the Evidence of the two Case Studies in 8.1. These are then summarised in a comparison of themes of the organisational frameworks which operate in the two cases in 8.2. A review of the hypotheses is described in 8.3. The lessons learned from the two Case Studies are then described in 8.4 followed by the Implications of the research in 8.5 which deal with policy, management and design aspects of aided self-help projects.

Finally the Next Steps in 8.6 describe the case for creating a development framework for user interventions in self-help core housing processes in the Egyptian context.

## 8.1 Evidence from the two Case Studies.

The experiences of user transformations of formally provided housing and its environment in both multi-storey and core housing are very similar. This has been demonstrated both in terms of the reasons which created the conditions and which motivated people to actually build as well as in the respective processess which the extensions took place.

The transformation process, in both cases, represents a product of similar general social and economic facts in the Egyptian context. Low income households usually have little or no access to formal housing markets. The informal market is becoming less and less accessible to the low income groups through continuous and rapid inflation of land prices with fewer and fewer low income households managing to obtain public housing. Under the prevailing circumstances to obtain accommodation in a public housing project represents a rare and valuable opportunity as well as a life time solution.

Moreover, in many cases public housing is the only available solution for a second generation of households in marrying "in" their sons and daughters. Untill the problem of supply and size is solved, public housing provision should be designed, built, managed and administered to accommodate users transformation activity.

It has also been shown that this activity contributes to the housing stock and floor space addition in a relatively cheap and satisfactory way. The two case studies

reflected the significance of income generating activites as an essential part of the development of the community as a whole as well as in supplementing the very limited household financial resources which otherwise would not have been sufficient to sustain basic needs such as food and clothing and children's education.

The quality of the built environment which people have built has not been the result of a free choice. The initial provision in both the multi-storey and single storey cases presented a major source of positive and negative constraints. Positive in the sense that basic accommodation was at least provided with services and facilities at affordable rates. However the initial provision presented a major source of negative constraints through a basic lack of understanding of user's requirements. This was less so in the core housing case but nevertheless quite apparent since the initial core was often replaced or, as in most cases, the extension plan as suggested by the authorities was seldom adopted.

The financial resources played an important role as a source of limitation in so far as loans and finance mechanisms for building were absent or were unaffordable. In addition the lack of technical advice both in planning and building has led to a quality which reflects these poor supportive services. The risks created by the threat of demolition and insecure tenure were also causes of lower standards of quality in both cases.

It is worth looking at the further positive outcomes of this intervention process. The residents are working as small scale developers. Although they are very poor their contribution is much the same as " moneyed developers " or richer governments who develop sites and increase the housing stock through new projects. The difference lies not so much in the time span needed to carry out such work but in where and when it actually occurs. In these case studies the development process is directly related to the local household economy and is far less predictable than formal project work. Its advantage is that it appears on the scene gradually and without major capital expenditure along with colourful and human characteristics which are sadly lacking in formal projects.

Furthermore the positive improvements in occupancy rates should not be underrated as well as its ability to solve the housing problems of the second generation. This is achieved through a self-sustainable, self-reliant and effective process of management of resources.

One of the main shortcomings in the New City Settlements has been attracting new residents. In the case studies of Helwan and TORCHS it has been shown that they achieve not only a high rate of settlement but a considerable addition to the number of habitable rooms. People would move immediately to TORCHS or to Helwan if they could. There is an informal "waiting list".

Another very positive outcome discovered in the so called " slums " of TORCHS and Helwan has been the establishment of a dynamic income generating network. Indeed it is this aspect which is so much sought after by those wanting to move in to TORCHS and is sadly lacking in the New Cities due to their restrictive commercial practises and legislation. Income generation, as one of the main conclusions, could be said to be the central issue in the improvement of living conditions of respective households as well as one of the most important roles in the consolidation of the new city environments as a whole.

Whilst households, in both cases, draw on their own resources to organise their building activities and thus establish their future for an improved economic development it is perhaps not surprising that they are unable to get together in order to clean and maintain public spaces.

There is evidently a lack of any comprehensive system of maintainance and rubbish disposal from the Local Authorities side as well as a severe neglect of infrastructure networks. This has been more evident in the Helwan multi-storey case than in TORCHS due to a lesser degree of public space which is controlled by the users. In the single storey core housing of TORCHS public space is more often user controlled resulting in private and semi-private gardens. However generally speaking public space remains neglected and full of solid waste. As in Helwan there is a lack of any co-ordinated maintainance and rubbish disposal system.

There is clearly a need to encourage the community to organise themselves in order to be able to maintain and upgrade the environment. Measures need to be taken which would give enabling powers directly to the community for environmental upgrading issues such as maintainance and waste disposal. The community itself can without doubt contribute in terms of human and financial resources in order to establish a more effective and sustainable system of environmental management.

It is quite clear that the transformation process of both case studies is taking place in a political and economic climate which is typical of most of the developing countries. This is an example of the classic bi-polar climate, where a government on the one hand sets the standards and they manage, control and distribute the resources according to their own (unrealistic) interpretations and conceptions of development. Whilst on the other hand there is the majority of the population who are controlling very limited resources but are operating a very dynamic, self-sustainable economy. This economy is one which they are able to survive with and perhaps achieve some improvement in their living conditions. The problem is that the two poles are not compatible in their objectives or methods of operation.

## 8.2 Comparing some of the themes of the Organisational Frameworks of the two Case Studies.

Table 8.1 a. and b. summarises some of the more important themes in the organisational frameworks behind the user's transformations in the two Case Studies.

| THEME | CASE STUDY 1 Multi-Storey Extensions | CASE STUDY 2 Core Housing |
|---|---|---|
| 1.Community action | Very strong sense of community.They were able to put political pressure on the Local Authority to allow the extensions to be built. The community was able, through public subscription, to finance the construction of a mosque and a community services centre. | A strong community base which was able to negotiate with the Local Authoriy to legalise the construction of the first floor stage construction and to alter the access road to the settlement. |
| 2. Negotiation among neighbours | An efficient negotiation process takes place between neighbours living in the same vertical section in a block as well as between households in different adjacent blocks. | No negotiation was required although some co-ordination between neighbours concerning the position of light wells could have improved the level of ventilation and daylighting in many cases. |
| 3.Financial Mechanism. | The contactors play a very important role in the provision of credit. Meanwhile, borrowing from relatives and friends and joining savings clubs are quite common among the resdients. | Contractors are not always involved though labourers are frequently hired for specific jobs. Borrowing from relatives and joining savings clubs are quite common. |
| 4.Income generating activites | Income generating activities play a very important role in the process. These include the opening of shops and small commercial businesses on the ground floors.Poultry keeping and livestock rearing such as sheep and goats form an essential part of income generation. | Similar to Case study 1 activities such as the opening of shops and small businesses, workshops and poultry and livestock keeping are very common. The letting out of rooms and small independent flats are also common. Also the subdivision and selling of parts of plots to relatives takes place frequently. |

Table 8.1 a Themes of organisation in the two Case Studies.

| THEME | CASE STUDY 1 Multi-Storey Extensions | CASE STUDY 2 Core Housing |
|---|---|---|
| 5. The role of women. | Women play and important role in the community development through savings and putting social pressure on neighbours who are required to join the extension process. The women are also mainly responsible for tending to the rearing of poultry and small scale vegetables growing activities. | Women influence the design of the extensions through the familiarity of the neighbours own work and experiences. They also play an important role in fund raising for building. A part of their activity is devoted to crop growing and the cultivation of captured public space. |
| 6.Building Materials. | Multi-storey construction depends on reinforced concrete framework systems supplied by contractors. Individual extensions are built out of locally available materials such a block and brick. Plaster is common on external walls and are painted with emulsions. | Re-cycled materials such as timber,brick and block are used. Sand and soil for mud brick are also incorporated into houses. Other conventional methods of construction are applied such as re-inforced concrete skeleton systems. There is an available supply of second hand kitchen and bathroom units as well as door and window frames. |
| 7. Information and advice. | The exchange of ideas and advice for jobs is obtained through mutual collaboration and social exchanges. The contractors are responsible for delivering all the specialised technical information and knowledge | Similar to the multi-storey context but information on building and planning of the extension and in particular on ventilation and daylight requirements is more difficult to obtain. Access to specialised knowledge comes less easily and depends on connections in families and to the community as a whole. |

Table 8.1 b. Themes of organisation in the two Case Studies.

## 1. COMMUNITY ACTION.

A large part of the evidence centres on the high degree of community action in the joint effort of residents to help eachother, their families and households, to reach a stronger foothold on the economic ladder of "success" as well as develop their community into a richer social and cultural base not only for themselves but for their children and the generation to come.

A strong sense of community is the most positive conclusion which can be drawn from the research and one which needs to be built on to increase the effectiveness of such activity. This condition is an essential pre-requisite for programmes based on self help approaches. It can only come about if the conditions are created for people to act and re-act in their own right on specific issues. The first of these is the establisment of a community organisation.

The negative aspects, as found in the study, are environmental issues such as services and infrastructure provision, the physical planning of neighborhoods, the designation of public space, land access, finance and management. These are beyond the efforts of any community organisation though the research has shown that informal efforts have made some successful attempts to resolve these issues. The initial provision by government whether multi- or single storey does not realistically consider the requirements of the urban poor and how these requirements should be met. Only out of the innovative and imaginary efforts of residents

have flats and core houses become acceptable places to work and living.

## 2. NEGOTIATION AMONGST NEIGHBOURS.

The process of negotiation among neighbours is an essential pre-requisite for the success of self-help projects especially in the multi-storey context. Without this the extensions are not possible. In the core housing case study there was a lack of this negotiation method. This is mainly due to the fixed plot size concept i.e all plot boundaries were pre-determined and the walls were built before the occupiers arrived on the site. A great deal of improvement can be achieved if negotiation processes were encouraged for the determination of plot boundaries.

## 3. FINANCIAL MECHANISMS.

Financial mechanisms in core housing are less developed than in multi-storey housing. This is mainly due to the nature of the process in multi-storey housing whereby money is needed immediately, whether in cash or on a deferred loan basis, to build the concrete multi-storey supporting frame. In core housing residents are not generally able to obtain loans from any formal organisation in order to finance the building of extensions. The type of construction in this case has a varied appearance and clearly reflects this method of finance.

## 4.INCOME GENERATING ACTIVITES.

Income generating activities play a very important role towards the development of the settlement in both forms of self-help and especially in the case of core housing. The income generating activities as referred to under Table 8 for core housing are essential to supplementing household income and helps provide basic services, community facilities and transport links to the home and community as a whole. In the less urbanised TORCHS project where the households had easier access to land (either on-plot or directly adjacent to their plot) more supplementary income was derived than in the multi-storey case of Helwan.

## 5.THE ROLE OF WOMEN.

It cannot be underestimated that the role of women plays an important role in the process as a whole. This is not only so in financial terms but also in local / political terms where they could be described as social engineers in the process. There is also their physical effort in running shops, small schools, rearing livestock and poultry as well as being able to help in minor building activities. The design task is mainly influenced by the women whose skills in selecting the right design option for a plan and often within tight limits of space produces good results.

## 6.BUILDING MATERIALS.

Building materials are mainly used directly on site by hand or with the assistance of small power tool devices. The whole technology is mobile, affordable and recyclable. Construction standards are related to skills and to requirements. The more complex multi-storey type building works rely on concrete and reinforcement whilst infill building work and one to two storey construction can tolerate a wide variety of both prefabricated materials as well as home made types and recycled types such as wood, bricks, block and sheet materials.

## 7.INFORMATIOM AND ADVICE.

Information and advice on environment and housing has generally been ignored by the Local Authority. It has developed to a degree of sophistocation in the case study areas especially if one considers that the knowledge of users has been built up by experience and the habit of doing and learning as problems present themselves. With little formal education people have learned to plan and construct in all domestic levels of the living process and pass on information and advice to those who ask and to those in direct contact with particular issues of the extension process.

Similar to income generating activies which have developed into informal economic reform devices, information systems have developed into mechanisms of informal policies of good government. This research pays due respect to these

devices and mechanisms which are upheld by a relatively new policy of aid maintained by outside aid agencies who put emphasis on local initiative to help resolve problems which deal with the alleviation of poverty in developing countries.

## 8.3 Review of the Study Hypotheses.

The four hypotheses provided in the introduction to the study have greatly influenced the research strategy, particularly in relation to methodology of the case studies. It is important at this point to review the extent to which the study hypotheses have been fulfilled and verified.

### Hypothese One

**"The residents of public housing schemes who manage to construct multi-storey extensions were operating through supportive political and socio-economic circumistances which have helped them to strengthen their skills , capabilities and potentialities ".**

The multi-storey extensions process ,in the cases of Helwan and El Tebeen , were in fact carried out through supportive political and socio-economic circumistances. As has been shown in chapters 3 and 4 , in both cases the authorities ignored the illegally built extensions . This relaxed political climate was behind the multi-storey extension developments. The communities in question were able to put political pressure on the government to ignore their informal building activities because they were,in the main, public factory workers. The unity among the residents as well as the long term established social ties amongst the neighbours

helped the creation of a climate of mutual co-operation .

Avoidance of conflict and fear of endangering existing social ties amongst nieghbours was one of the main factors behind the viability of the constuction of multi-storey extensions . The climate created by a community which has the political power and strong social ties among its individuals encouraged small scale contractors to play an essential and important role in the construction and finance of the extensions. These were all supportive factors which allowed the multi-storey extensions to develop. In the case of Imbaba where the residents did not enjoy any political power due to their diverse working backgrounds and lacked communal homogenity, they were unable to put pressure on the Local Authority and the result is shown by the fact that only isolated individual extensions were built.

**Hypothesis Two.**

**" The users in aided self-help schemes as applied in the case of the Tenth of Ramadan Core Housing are confronted by restricting circumstances which discourage them from fully developing their skills and potentialities and make the most out of the available resources."**

This question has been substantiated by the research unquestionably - that TORCH residents are operating through unsupportive circumstances. These circumstances include the lack of technical advice and mutual dialogue with the Local Authority. The lack of suitable credit systems which could help towards the extension finance are a major part of the unsupportive circumstances. In the same way the

lack of secure tenure, unlike the usual practise in aided self-help projects have added to these problems.

However this hypothesis underestimates the users' achievements. In spite of these unfavourable circumstances residents have managed to mobilise their limited financial resources and build extensions to their core houses. In the process they have also managed to aquire some of the knowledge needed for designing and building through their informal networks of information and managament procedures. People were not deterred from investing inspite of the lack of security of tenure. This last point in particular demonstrates clearly the potentialities of such schemes and the core of effort which low income households find appropriate and attractive to their way of working and living.

Hypothesis Three.

**" The authorities judgement of the failure of aided self-help schemes, relying on TORCHS experience, has overlooked many positive acheivements of users due to the lack of any comprehensive evaluation. The judgement of the authorities is mainly based on superficial values of appearance and conformance to formality and uniformity. "**

It became quite clear from the discussions with the Local Authority in TORCHS that they had placed great value on aspects of appearance, formality and and uniformity. These views are quite common on every level of authority in Egypt. The interviews conducted with the North of Cairo and Helwan Local Authiorties support this conclusion.

The Authorities who have condemned the Core Housing Scheme experience and stamped it with failure from the outset

did not acknowledge or give much value to the various positive achievements in such schemes. The positive acheivements are partially due to the appropriate nature of incrementally grown housing for the low income users as well as their own resourceful solutions and potential schemes.

In this case of experiencing many physical and political limitations users have managed to contribute considerable habitable space to the New City as well as the initiation of commercial activities, an increase in the settlement rate in terms of occupancy rates and household size and type. They have also helped in attracting new settlers and have helped to consolidate the environment and transform it to a more hospitable one.

Hypothesis Four.

**A great deal of the deficiencies and negative outcomes of aided self-help projects which have been implemented are due to the poor designs of the physical plan and of the initial core house provision as well as their lack of an appropriate and comprehensive management and development plan for such projects.**

The design of the initial provision, in the TORCHS case, as well as the physical plan as a whole could be easily criticised.

The layout plan of the neighbourhood was defective to the extent that access roads and in particular the main entrance to the project was not suitable for the type of transport which residents required. The preference for private mini-buses and service taxis overtook the more formal approach of public transport service which is provided by the government . This resulted in a new access road

and an informal stopping place for mini-buses and service taxis . The public spaces had little to offer in terms of designated routes and uses for the community. They represented a hostile and unuseful environment which has become neglected.

The idea of providing concentrated commercial space in the " neighbourhood centre " and the designation of residential areas devolved through the residents own specific requirements into a decentralised pattern of commercial activity. Shops opened up along dispersed routes located according to where the actual demand was. This dispersed pattern was directly related to the needs of the low income households and the way in which people went about buying and selling .

The plots for housing were not relatively speaking small in their areas but the standardisation meant that many households ended up with much smaller plots than their actual requirements. The plot shape and position were largely responsible for creating difficulties of ventilation and daylighting. The core house design - if the plans were to be followed - would have been unacceptable from the residents practical needs point of view as well as their cultural requirements in terms of privacy and circulation.

In terms of the self-help nature of TORCHS supportive management was lacking. The scheme was treated as if it were a finished housing project with the authority's role being one of policing and controlling rather than that of providing back-up technical advice and management

support for the residents role of development. In the first place residents were not consulted about their views either with respect to the initial provision or to the future development of the community. Instead of co-operation between Local Authority and residents the relationship was characterised by confrontation and a gradual feeling of mistrust.

Extendable core housing is a housing solution which has great potentialities for the Egyptian low income households in general and in particular in the context of the New Cities. Great improvements could be achieved if the following aspects were taken into account.

1. Supportive political and social climate which will encourage the mobilisation of financial resources.

2. Well designed projects in terms of their ability to be less deterministic and more accommodating to users inputs and intervention from the early stages of projects.

3. The political will from the Authority's side to reach a compromised agreement on issues of standards.

4. Good management which envisages its role as providing assistance and help rather than merely policing and control.

## 8.4 Lessons learned from the two Case Studies.

1. If the users have a freehand to intervene and transform their housing they can create their own organisational frameworks which help them to introduce improvements in their living conditions through relying on their own resources. This in turn generates a socio-economic organisation which uses available resources with a minimum of waste.

2. Housing which does not respond to user's needs is subject to physical changes and transformation. Attempts to prevent such intervention by means of controls and policing only results in a lower constructional quality and higher structural risks.

3. A more comprehensive attitude from the government and local authorities would result in a better quality. This attitude allows users to take action over their housing problems in collaboration with the local authority in order to avoid major risks and negative results. This in turn requires a process of mutual communication between residents and the authorities in order to understand eachother's priorities and commitments and to reach compromise solutions through negotiation.

4. The users will only respect regulations and standards which are realistic enough to meet their social, cultural and economic needs and obligations. If such realistic standards are applied the users themselves will be the best organisational body to enforce and guard the application of those standards. Hence standards should be decided upon only through negotiation with the users.

5. In order to evaluate user's inputs and efforts in building extension activity qualitative methods of research proved to be very valuable and indespensible. The users own words, explanations, views and stories reflected the different components behind their decision making. Through qualitative methods they exposed their own needs, priorities and

limitations along with all the complex relationships between them in a way no other statistical format would have been able to achieve.

6. When users take control they transform even the most rigid and standardised environments into more flexible and variable ones, reflecting their own status and value judgements. Residents can re-plan whole neighbourhoods by changing the pattern of land use and spatial relationships influencing the position of shopping outlets and traffic routes. Thus it would be more realistic to invlove the residents in the planning of their settlements in the first place by handing to them an upgradeable environment which has been built for gradual consolidation and development at the levels of physical planning, block infrastructure and house design.

## 8.5 Implications of the Study.

The implications relate to policy and management aspects as well as to the design of aided self help projects. Some of these implications apply to self help in general and others apply more specifically to the Egyptian context and in particular to the New Cities Settlements.

The main purpose of the implications is to suggest that since it has been shown that the self help process is a major generator of housing, employment and development the governement should re-examine its housing policy and incorporate the process into the New City Settlement programmes as a viable alternative to their formal solutions.

### 8.5.1 Policy and Management Aspects.

a. There is a great need for projects which allow a balance of involvmement from the users on the one hand and the government and professionals on the other. This can only be achieved through inviting users to participate in the decision making process from an early stage in projects. The issues which users could decide on include, standards of services, rate of development, priorities of investement and above all planning and designing their dwellings. Environmental management and maintainance are areas also which could fall within the jurisdiction of residents.

The following measures could be used as avenues along which prospective residents could participate in the decision making process.

1. Layouts which set limits and guidelines rather than designs which provide finished and articulate space for housing units and public space. The policy should be to set up local information offices where development is to take place. The physical plan could be developed with an "on site" presence of designers, planners and financiers.

2. Gradual consolidation of the layout can take place, as it does happen in unplanned settlements, and thus avoiding development according to pre-determined unrealistic norms.

3. The starting points mentioned above incorporate the important community organisation and action refered to under the themes of organisation. These could be managed under a sub-division of the project into small organisational units.

4. The presence of trained management staff on site can lead to the taking of decisions which serve the actual needs of the community in the development as a whole as well as the decisions which deal with house building on the plot. The management staff should have the skills required to communicate with residents and should be able to speak their laymen's "language". At the same time residents need some training in communicating with professionals. Both sides need to be able to communicate in a simple and convincing manner. The management staff should include female members who are able to communicate with the female members of households. It has been shown that the women's role in the process is an important one and needs to be present in the link between the management staff and the local community.

b. Housing for the poor is an issue which cannot be addressed in isolation from the varied components of activity which they carry out to support their life styles and their aspirations and ambitions. These include: the ways in which the poor work, not only their formal job but other activities which they perform to generate additional income; the way in which the poor shop and obtain food; the social and moral support which is gained from relatives and friends are all an integral part of the development of housing projects. They should be encouraged and planned for in the project aims, designs and implementation phases.

c. The present policy of the Government and in particular in its management of the New Cities needs to be re-aligned with a less consumer orientated approach to avoid

dictating standards of services and quality of housing which are beyond the affordability of low income households and yet expect the poor to pay for them.

If the Government's attempt to establish new communities in the desert, where the poor can enjoy a better and more dignified way of living than that of the slums of the inner cities, then they should announce an alternative to their conventional way of thinking, of top to bottom decision making processes.

The Government should encourage the private sector to invest in the economic industrial bases of the new communities and at the same time encourage low income households, who will become attracted by the availability of employment, to organise themselves, to take control of available designated land and with the help of trained technical and management staff, to plan it and develop it according to the standards which they can afford and pay for the costs of services and maintainance.

d. The idea of rented core housing, provided by the private sector employees to have their workers housed in the New Cities, could have promising potentialities provided that a formula would be established to compensate the tenants for their investements in extending their houses when their tenancy is expired.

e. Any form of housing provision should allow and plan for users inputs into the planning of settlements, the

block layout and plot designs. Residents own development should be a process which takes place within the governments development so that settlements become supportive and meaningful environments to their residents.

f. A variety of financial loan packages should be available to households in self help projects. The different beneficiaries should be able to select between loan options which suit their particular requirements. Loans with reasonably relaxed repayment terms should also be available for external house finishing.

8.5.2 Design Aspects.

1. Self-help projects should have an organic form of structure composed of semi-independent units which are capable of operating within their own mechanisms of decision making giving alternatives on lower levels whilst carrying out directives and objectives from higher levels. For example a plot owner should be able to consider how he or she could plan their house construction programme over a period of time, obtain finance and building permissions and proceed accordingly whilst respecting the guidelines laid down by the local authority. Thus within such semi-independent units different design and management approaches would be applied according to the decisions taken by the beneficiaries in co-ordination with the responsible management team.

2. In the context of the New Cities aided self-help projects should not be initiated on technical standards alone

as in the case of TORCHS but should be developed from the starting points of social, economic and cultural standards as demonstrated in the multi storey experience of Helwan. From the experience of the two case studies there is much more to the business of living than of building houses on their own. In his book "Housing without Houses" Hamdi suggests that projects involving user interventions should in fact have an form of structure which is built up of semi-independent structures within a main structure.

3. The general design implication is that the initial provision has to be tight and small and which can be lived in, but which immediately lends itself to additions and modifications over time. Similarly the physical neighbourhood plan should respect the fact that a neighbourhood is going to develop as the community members establish themselves and their relationships with eachother. There is a pre-occupation in ready made housing projects with the idea that neighbourhood relationships can be designed as well. Very often they do not develop.

The design implications ( of building the conditions for people to house themselves) presents a dilemma to the policy makers and to the designers. How does one provide housing without building all the houses in advance ? How does one build neighbourhoods without determining the position of shops and commercial centres as well as transport links and public facilities ?

First of all the problem cannot be approached in the traditional architectural method of thought and design

approach. This approach tries to anticipate everything beforehand. The opposite is required, and indeed a breed of architect is needed who is capable of designing a minimal shelter which can be developed over time in various combinations of types of habitable spaces. Similarly the neighbourhood plan should be able to accomodate marginal changes by the residents, enhancing rather than jeopardising environmental performance and quality.

This is a case for thoughtful and ingenious design rather than drawing up a room and wc / kitchen combination for future expansion. This kind of temporary shelter approach is wasteful since it more often implies a technical "core house" solution with predetermined plans both for the house and neighbourhood layout.

Perhaps contrary to current opinion the idea is put forward here that a strong architectural profile is required. This has to do with providing permanent basic shelter, however small, in one storey or in five stories, which households can move in to and start building relationships with other households and begin to build the future parts of their houses whilst developing other income generating activites in their house and community as a whole.

4. The programme, as broadly outlined above, specifically still predetermines plots but not in a singular figure but rather in a range of the number of plots that are possible to have based on actual requirements and affordability of people. Also the basic infrastructure and access roads are roughly predetermined but the residents will

be able to make a lot of choices. These choices could include the shape and size of plot; the relationship between the plot and the access road and other spaces and the position of the house within the plot.

5. In order to run such projects the allocation of households within plot groupings has to be done according to an assessement of household needs and priorities. It will be the task of the management team to advise the beneficiaries on which group they best fit into and which plot.

The advice will be based on results of interviews conducted with the beneficiaries by the management team. The design implications extend beyond the physical design into the setting up of organisational structures, in particular in the areas of management and information to assist and help beneficiaries in their development work.

6. With respect to the design implications mentioned above and in making a review of the case studies and their characteristics there is clear evidence that income generating activites play a central role in low income housing development. These activites require space. In the case study projects where there was enough public space it was taken over for gardens for crop growing and animal rearing. Even in the multi-storey case, space under blocks and around them was used for these activities for additional income support. It helps towards cutting down on food expenses as well as supplementing the otherwise usually poor diets of the low, income households.

In the context of the Egyptian New Cities in particular, the idea of urban small holding should be considered. The design implications are that plots and public spaces should take into account that households could manage and develop small pieces of land for horicultural purposes and small scale animal husbandry businesses. The English allotment system is a parallel which could benefit the Egyptian context if it were considered in close relationship to the plot and group of plots. The perishable food products such as eggs, meat, vegetables and milk are normally produced in the villages and are transported to the urban centres where the price of such products are not at all within reach of their limits of affordability. The concept of urban small holding therefore would help create a stonger economic base for community development and subsistence income. Coupled to the re-use of waste water from households, the small holding concept could flourish with water resources for the irrigation of the small plots of land.

## 8.6 THE NEXT STEPS.

This research has shown that there is much nore to self-help and core housing than meets the eye. Ironically outside of government housing people build on their own and in doing so contribute to the national housing stock. The case studies have shown that a similar contribution is present in government housing projects in the Egyptian context. This has been done with the intention that the book should be by no means closed on this process and that the information obtained

is substantial and factually strong enough to consider further applications along the lines described in these conclusions.

Without introducing any new legislation, as such, Codes of Practise should be written for the existing multi-storey buildings and their transformation. This should be aimed at contractors and users and should be developed with Local Authorities to be maintained as a standard of operation to ensure low costs and efficient building standards. Such a Codes of Practise would help achieve levels of environmental quality and standards of daylight, access and financial targets of proposed multi-storey extensions. This information could be made cheaply available or even distributed free of charge to those considering such action.

Design and management studies need to be set up to plan and build for the self-help process in both multi- and single storey core housing. Guidelines of development need to be written up which accommodate the points drawn up in these conclusions. Of central importance are the role of women in the housing process and the income generating activities in association with the small holding concept.

These next steps are beyond the limits of this research but since the facts and knowledge is now proven enough serious consideration should be given to this proposal.

# REFERENCES


Abdel Azeem,A. (1989) The Communal Services of Low Income Housing Settlements, Masters Thesis, El Azhar University,Cairo.

Abdel-Kader and Ettouney.S, 1989. The Egyptian New Settlements, A Critical Review with special reference to adopted housing policies; Open House International, Vol.14 No 2. 1989.

Abou Lughod,J. 1971. Cairo;1001 Years of the City Victorious, Princeton University Press, New Jersey.

Abrahams,C. (1964). Housing in the Modern World. Faber and Faber,London.

Abt Associates Inc., Dames and Moore and GOHBPR. 1982. Informal Housing in Egypt, USA Agency for International Development, Cairo.

Ahmed,M (1990) Housing Flexibility, Synthesis and Application with Reference to the Egyptian Experience in Cairo. PhD thesis, University of Helwan,Zamalek, Cairo.

Alexander,C. (1979) The Timeless Way of Building. Oxford University Press, New York

Aref,H (1989) The Latent Potentialities of Low Income Residents in Housing Projects, Masters thesis, Cairo University.

Bamberger,M. Gonzalez-Polio,E. and Sea-Hau.U. (1982) Evaluation of Sites and Services Projects: The Evidence from Salvador, Institute for Housing Studies BIE, The World Bank, Washington D.C

Barrada,A. 1979., Public Policy and Economics of Housing, Interim Report Working Papers, Cairo University and MIT, Cairo.

Basil-WBTL-Nassar and J.A.Jones Int.Inc, 1984 Helwan New Community, Urbanisation Plann - 1985, USAID,Cairo,Egypt.

Bass,H. 1979. Urban Low Cost Housing in Egypt, Building Research Establishment No 141 /79, Garston, Watford.

Benjamin,S. (1985) India- Formal versus Informal The Architectural Review No.1062.

Bhatt,V and Navarette, J. (1991) The Self Selection Process; A Simulation Exercise. Open House International Vol 16. No.4

Black, A. (1988) State Community and Human Desire, A Group centred Account of Political Values. Harvester,Wheatsheaf, St. Martins Press, New York.

Bouchair,J (1984) **The Problem of Adaptability in Mass Housing in Algeria.** MPhil thesis, University of Newcastle on Tyne.

Burgess,R. (1982) **Self Help Housing Advocacy, A Curious form of Radicalism.** A Critique of the work of John F. C. Turner, in Self Help Housing, A Critique (ed) by Ward,P Mansell Publishing Limited, London.

Canter,D. (1977) **The Pyschology of Place,** The Architectural Press Ltd, London.

Canter,D and Lee,T (1974) **Psychology and the Built Environment.** Architectural Press, London.1974 pp 184 - 194

Chana,T. (1984), **Nairobi: Dandora and Other Projects,** in Payne,G (ed), Low Income Housing in the Developing World; The Role of Sites and Services and Settlement Upgrading, John Wiley and Sons,Chichester.

Coleman,A. (1985) **Utopia on Trial,** Hilary Shipman, London.

Dasgupta,A (1990) **Negotiating for Growth and Change - a study of user initiated transformation of Formal Housing.** Open House International Vol 15.No 3.

Dayaratne,R. (1991) **Supporting Peoples Place Making: The Role of the Architect in Housing, Sri Lanka,** Open House International Vol 16. No 4.

Dayaratne,R. (1991) **Supporting Peoples Place Making: Theory and Practise - The Case of Support Housing in Sri Lanka,** PhD Thesis, Newcastle University.

Doiling, J. (1973) **A Two-stage Model of Tenure Choice in the Housing Market,** Urban Studies, No.10,pp 199-211.

Eid,M and Radwan,M. 1990. **Self-Help and Urban Environment Upgrading;** Seminar proceedings on Shelter and Urbanisation, Ministry of Housing, GOHBPR, Cairo.

Eiser,J and van der Plight,J (1988) **Attitudes and Decisions; New Essential Psychology.** Routledge, London and New York.

El Kadi,G., 1990. **L'Articulation des deux circuits des gestion Foncier en Egypte; Le cas du Caire,** in Housing Africa's Urban Poor, Manchester University Press.

El Messiri.S, 1989. **The Squatters Perspective of Housing, An Egyptian View;** in Housing Trends in Thirteen Countries edited by Vliet. W. Duke University Press.

El Messiri.S, 1990. **Proposed Framework for an Integrated Approach to Institutionalisation of Community Upgrading and Sites and Services Projects.** Seminar Proceedings on Shelter and Urbanisation, The Ministry of Housing, GOHBPR,Cairo.

Fahmy, N. (1990) The Household and Urban Characteristics of the 10th of Ramadan, The National Centre for Social & Criminological Research,Cairo, Egypt.

Fathy,A (1987) A report on the Living Conditions in a Public Workers City. El Talia Journal No 2. Cairo.

Gardner,D and van Huyck,A. (1990) The Helwan Housing and Community Upgrading Project for Low Income Egyptians: The Lessons Learned, Agency for International Development, Cairo, Egypt.

HABITAT (1984), Sites and Services Schemes; The Scope for Community Participation, Nairobi, Kenya.

HABITAT (1986), Supporting Community Based Housing: Sri Lanka Demonstration Project - Case Study, Part 2, Habitat, Nairobi, Kenya.

HABITAT (1991), The World Habitat Awards 1985 - 1989; Inovative and Successful Solutions to Global Housing Problems, The Building and Social Housing Foundation, Lieicstershire,UK.

Habraken N.J (1970) Three R's for Housing. Scheltma and Holkema, Amsterdam.

Habraken,N.J (1972) Supports; an alternarive to Mass Housing, Praeger Publishers, New York.

Habraken N.J (1983) Transformation of the Site. Awater Press, Cambridge, Massachusets,USA.

Hamdi,N (1985) Low Income Housing:Changing Approaches. The Architectural Review, August No 1062.

Hamdi,N (1991) Housing without Houses. Van Nostrand Reinhold,New York.

Integrated Development Consultants (1989), The Appraisal of Selection Criteria: The Housing and Community Upgrading for Low-income Egyptians Project, USAID, Cairo, Egypt.

Joint Research Team, 1979. Cairo University and MIT, Seminar Proceedings, Core Housing and Sites and Services Projects for Low Income Groups, The Ministry of Housing, Cairo.

Kahneman,D and Tversky,A. (1979). Prospoect Theory; an Analysis of Decision Making Under Risk. In Econometrica, Vol 47, pp 263 - 291.

Katerogga,J. et al (1983) Non-Conventional Approaches to Financing Low Cost Housing Schemes in Kenya: Two Case Studies for UNCHS (HABITAT), Housing Reseach and Development Unit, University of Nairobi,Kenya.

Kellet,P 1987 What Went Wrong in Killingworth?. Open House International Vol No pp

Lawrence, R. (1989) Public and Private Sector in the in the Definition of Housing Quality; in Quality in the Built Environment, Conference proceedings (ed), Wilkinson,N. Open House International Newcastle on Tyne.

Mangin,W and Turner J. (1968) The Barriada Movement in Progressive Architecture, Vol 5, May 1968 (pp 162).

Mangin, W.(1967) Squatter Settlements in Latin America, a problem or a solution. Scientific American, Vol 217 No 4, October 1967.

Mathey,K. (ed) (1992) Beyond Self Help Housing, Mansell, London.

Michelson. (1980). Long and Short Range Criteria for Housing Choice and Environmental Behaviour. Journal of Social Issues, Vol 36, No 3 1980.

Ministry of Housing, 1982. Marketing Reports on the 15th May New City, Cairo.

Ministry of Housing, 1991. Housing in Egypt, Cairo.

Moore,G. (1974) The Development of Environmental Knowing: An Overview of an Interactional Constructivist Theory and some data on Within Individual Development Variation; in Canter, D and Lee, T. Psychology and the Built Environment,Architectural Press,London 1974, pp 184-194.

Newman, O. (1972). Defensible Space; Macmillan, New York.

Patton,M (1990) Qualitative Evaluation and Research Methods, SAGE publications, London.

Peattie,L. (1982) Some Second Thoughts on Sites and Services, Habitat International Vol 6 No 1 / 2.

Peattie,L (1983) Realistic Planning and Qualitative Research. Habitat International Vol 7 No 5/6.

Pirsig, R. (1974) Zen and the Art of Motorcycle Maintainance, Vintage, London.

Porteous, J. (1971) Design with People. The Quality of the Urban Environment; in Environment and Behaviour. July,1971 pp 155-177.

Rappoport, A. (1980) Environmental Preference, Habitat Selection and Urban Housing, in The Journal of Social Issues. Vol 36, No.3,1980.

Rappoport,A (1983) Development, Culture, Change and Supportive Design; in Habitat International pp 249-267 Vol 7. No 5/6.

Rappoprt,A (1985) **Thinking About Home Environments, A Conceptual Framework.** In Behaviour and Environment, 1985 Vol 8 pp 255 - 286.

Rappoport.A (1989) **Environmental Quality and Environmental Quality Profiles;** in Quality in the Built Environment, Conference Proceedings (ed), Wilkinson,N. Open House International. Newcastle on Tyne.

Robinson, J. (1987). **Trade off games As a Research Tool for Environmental Design,** in Methods in Environmental and Behavioural Research (ed) Bechtel R et al, Van Nostrand Reinhold Company Inc.

Rodell,M. (1983) **Sites and Services and Low Income Housing,** in Rodell,M. and Skinner,R (eds), People,Poverty and Shelter, Methuen,London.

Sanoff H, (1990) **Participatory Design, Theory and Technique,** Henry Sanoff,North Carolina State University,USA.

Sakr,S. 1983. **In-Use Modification of Public Housing in Cairo, Egypt,** Masters Thesis, MIT.

Sinha,A (1991) **Participant Observation, A Study of Sate Aided Self Help Housing in Lucknow,India.** in Tipple,G and Willis K (eds) Housing the Poor in the Developing World.Routledge.

**SPSSX Users Guide** (1986), McGrow-Hill, Spss Inc,Chicago,USA

Steinberg,F (1984) **Ain El Sira in Cairo:The Architecture of Poverty,** iin Open House International Vol 9 No 2.

Steinberg,F (1987) **Cairo Informal Housing and Urbanisation:Positive Contribution and Challenge for the Future.** Paper for the Seminar on Official and Formal Supply for Low income Housing in the Third World. IHS Amsterdam.

SWECO (1983) **Tenth of Ramadan New Industrial City: Growth Plan 1982 - Final Report,** The Research Studies Organisation, The Ministry of Development, Cairo.

Tipple,G,Wilkinson,N and Nour,M (1985)**The Transformation of Workers City of Helwan.** Open House International Vol 10. No 3.

Tipple,G and CARDO staff (1991), **Self Help Transformations of Low Cost Housing; an Introductory Study.** CARDO, The International Urban Press, Newcastle upon Tyne.UK.

Tipple,G. and Willis,K. (1991) **Discriminant Analysis,Tenure Choice and Demand for Housing Services in Kumasi, Ghana,** in Tipple,G and Willis,K. (eds), Housing the Poor in the Developing World - Methods of Analysis, Case Studies and Policy, Routledge, London.

Turner, J. (1976) **Housing by People.** Marion Boyars, London.

Turner, J (1978). **Issues in Self Help and Self Managed Housing** in Open House International Vol 4 No 3.

Ward,P. (1984) **Beyond Sites and Services,** in Payne,G (ed), Low Income Housing in the Developing World: The Role of Sites and Services and Settlement Upgrading, John Wiley and Sons, Chichester.

Wikan,U (1980) **Life Among the Urban Poor in Cairo,** Livistock Publications,USA.

Wikan U, (1990) **Changing Housing Strategies and Patterns among Cairo Poor;** in Amis,P and Lloyd,P (eds) Housing Africa's Urban Poor, Manchester University Press,Manchester. UK.

Willis, K. (1986) **Discriminant Analysis,** in Models in Urban Geography Part 2 volume 4b. ( ed ) Yadav, C. Concept Publishing Company, New Delhi, India.

Yin,R (1989) **Case Study Research: Design and Methods.** SAGE publications,London.

Zahlan,A 1983. **The Arab Construction Industry,** St. Martins Press, New York.

GLOSSARY OF TERMS:

---

DEVELOPMENT WITHIN DEVELOPMENT:

A second phase of building and extensions introduced by the inhabitant against the background of initial government provision.

GAMIYA:

A rotating saving club.

HARA:

An alleyway (cross street) in the traditional quarters.

KEY MONEY:

Money paid in advance by prospective tenant to landlord in breach of the Egyptian Rent Control Act.

KEY READY:

Finished housing in the public sector often with subsidised finance.

TRANSFORMATIONS:

Governemnt housing which has been altered, extended or modified to match household requirements and which has been initiated by the resident occupier.

USER INPUT:

Action by the resident household who invest and build.

# APPENDICES

Appendix 1

Project name .....

Floor number .....

Flat type .....

A: Household Socio - Economic Data:-

1. What is the household size?

2. Who is living in this flat?

| Relationship | Sex | Age | Education and/or skills | Job |
|---|---|---|---|---|
| | | | | |

3. How much do you spend monthly on food, fuel, electricity, other - and either monthly or annually, how much do you spend on clothing, children's education, medical treatment and other.

4. What is the household total monthly income? *

5. Since when have you been living in this flat, and where have you been living before? Where do you come from originally?

6. What is the state of tenure of the flat.
In case of ownership, how did you acquire the ownership and where? How much did you have to pay?

B: The Extensions Data:-

1. Did you introduce any alterations or extensions to your flat?
If yes, state:-

| Type of extension of alteration | Date | Motivation for extension or alteration | Cost | Materials |
|---|---|---|---|---|
| | | | | |

2, Who did the work in each of the following stages:-

- The concrete structure
- Bricklaying
- Woodwork
- Finishings

C: The Implementation of Extensions:-

1. Did you discuss the matter of extension with any of your neighbours before starting? Who was the first in the block to suggest the extensions? Did you have different opinions in the household towards the extensions?

2. Did any of your neighbours have any complaints about the extensions?

3. If there was a contractor involved in the construction; how did you come to know him?

4. Where did you used to meet with the contractor and the rest of the neighbours to discuss the details of the construction (if it was required)?

5. How did you pay the contractor, did you write a contract, what were the terms of agreement?

6. How did you manage to pay for the extensions costs? Borrowed money, own savings, sale of jewellery, other property, or other.

7. What are the negative aspects either in the flat or the neighbourhood which are still a source of dissatisfaction for you? (if there are any).

8. What was the main problem which confronted you during, before starting or after the construction.

9. If you have more money what more would you do?

10. Did you have any problems with the local authority?

Appendix 2

**The Contractor interview:-**

1. When did you start your career as a contractor.
   What were you doing before?

2. What are the size of contracts you are usually involved in?

3. How many permanent labourers do you employ, and what training or skills do they have?

4. How do you pay them? and how much?

5. When did you start to work at the construction of the extensions?

6. How do you come to know the client or the group of clients?

7. Who decides upon the design?

8. Do you have to write a contract with your clients? and what is your marginal profit?

9. What are the terms of agreement between you and your clients concerning the repayment of the extension cost?

10. How much do you charge the client as a make up, if he did not pay the whole cost in cash?

11. What is the usual cost/$m^2$ for the extensions jobs?

12. How much are the costs of the cheapest and most expensive extension jobs *you have constructed?*

13. How do you usually obtain the cement and steel, and what are their current prices?

14. How long does it take to construct a 5 storey extension (one room/each floor).?

15. What are the aspects in the original provision which caused you difficulties during the construction?

16. Did you have any problems with the local authority; What were they? How did they end? and how do you manage to avoid those problems, if possible?

17. In case of agreeing on monthly repayments with the clients, how do you avoid defrauds from their side. How do you react if one of them cannot pay for some time?

18. Generally speaking, what do you think about the extensions process?

19. Can you give an estimation about your ccapital now?

Appendix 3

**The Local Authority Interview:-**

1. What do you think about the process of users extensions in public housing.
   What are the positive and negative aspects of it?

2. How do you usually deal with it? May I see one of the demolition orders?

3. Have you already demolished some cases?

4. Do you agree that if the extensions are legalised that can improve the result and helps in eliminating some of the weaker aspects of the process?

5. In case the process is legalized, what is the role that you, as a local authority, can play through your existing work power and resources?

6. What do you think of providing the users with units which are planned to be extended in the future?

7. Is there anything relating to this process you would like to add?

# Appendix 4

THE NATIONAL CENTER FOR SOCIAL
AND CRIMONOLOGICAL RESEARCH

The Department of Urban
Communities and New
Cities Research

Survey Form

For

The Tenth Of Ramadan New City Households

( encluding TORCHS )

---

Note: Data obtained through this form re-analised by researcher.

مسلسل

أسم رب الأسرة : –

العنوان : – المجاورة

المربـــــع

رقم العمارة

رقم الشقـة

الطابق : – الأول ( 1 ) الثانى ( 2 )

الثالـث ( 3 ) الرابع ( 4 )

الخامس ( 5 )

أسم الباحث : – تاريخ ملء الاستمارة / / ١٩٨٩

أسم المراجـع : – تاريخ المراجعـــــة / / ١٩٨٩

أسم المثقـــب : – تاريـــخ التثقيـــب / / ١٩٨٩

أسم مراجع التثقيب : – تاريخ مراجعة التثقيب / / ١٩٨٩

## بيانات عن رب الاسرة او المسئول عن الوحدة السكنية

١- الجنس : ذكر ( 1 ) أنثى ( 2 ) ☐

٢- السن : رقم حقيقى بالسنوات ( ) ☐☐

٣- الجنسية : مصرى ( 1 ) عربى ( 2 ) ☐

أجنبى ( 3 )

٤- الديانة : مسلم ( 1 ) مسيحى ( 2 ) ☐

٥- كنت ساكن فين قبل كده ؟ ( للمصرى فقط )

يذكر المكان

- المحافظة : ( كود المحافظة ) ☐☐

- المدينة : الزقازيق ( 1 ) بلبيس ( 2 ) ☐

أبو كبير ( 3 ) منيا القمح ( 4 )

قليوب ( 5 )

أخرى ( 6 ) تذكر

القرية ( 7 ) تذكر

٦- ايه اللى خلاك تنتقل للعاشر ؟ ☐

نقل من وزارة ( 1 ) العمل فى مصنع جديـــد ( ٢ )

الانتقال مع مصنع ( 3 ) العمل فى مجال الخدمات ( ٤ )

العمل فى مشروع تجارى ( 5 ) شـــراء سكـــــن ( 6 )

أثر اعلان عن عمل ( 7 ) العمل أو الانتقال مع الشركة ( 8 )

أخرى ( 9 ) تذكر

٧- بقى لك كام سنة مقيم فى المدينة ( عدد السنوات ) 

٨- أنت متزوج ؟ 

غير متزوج ( 1 ) متزوج ( 2 )

مطلق ( 3 ) أرمل ( 4 )

٩- أتعلمت لغاية فين ؟ ( تذكر الشهادة ) 

لـــم أتعلـــــم ( 1 ) أقـــرأ وأكتـــب ( 2 )

حاصـــل على الابتدائيـــة ( 3 ) حاصل على الاعدادية ( 4 )

حاصل على شهادة متوسطة ( 5 ) حاصل على الثانويـة ( 6 )

دبلـــوم عالـــــى ( 7 ) شهادة جامعيـــة ( 8 )

شهادة فوق الجامعية ( 9 )

١٠- أنت بتشتغل ايه ؟ يذكر النشاط تفصيلا 

يعمل فى قطاع الصناعة ( 1 ) الكهربـــاء ( 2 )

التشييد والبنـــاء ( 3 ) التجارة والمطاعم ( 4 )

النقل والمواصـــلات ( 5 ) التمويل والبنوك ( 6 )

الخدمـــات ( 7 )

أخـــرى ( 8 ) تذكر

١١- ياترى أنت بتشتغل فين ؟ يذكر

| | | | |
|---|---|---|---|
| الحكومـــــة | ( 1 ) | شركة قطاع عام | ( 2 ) |
| شركة قطاع خاص | ( 3 ) | مكتـــــب | ( 4 ) |
| بنـــــــــك | ( 5 ) | مصنـــــع | ( 6 ) |
| مدرســـــــــة | ( 7 ) | وحدة علاجية | ( 8 ) |
| ورشـــــــــة | ( 9 ) | محـــــــل | ( 10 ) |
| كشـــــــــك | ( 11 ) | قهوة أومطعم | ( 12 ) |
| علـــى عربـــــة | ( 13 ) | فى البيـــت | ( 14 ) |
| أخـــــــــرى | ( 15 ) | تذكر | |

١٢- نوعية العمل ؟ يذكر

| | | | |
|---|---|---|---|
| موظـــــــف | ( 1 ) | صاحب مهنة | ( 2 ) |
| حـــــرفـــــى | ( 3 ) | عامل فنى | ( 4 ) |
| عامـــل بنـــاء | ( 5 ) | صاحب محل | ( 6 ) |
| عـــامل عـــادى | ( 7 ) | ( فراش ) | ( 8 ) |
| تـــــــــرزى | ( 9 ) | تاجـــــر | ( 10 ) |
| عامل فى محـل | ( 11 ) | بائع متجول | ( 12 ) |
| عامل يوميـــة | ( 13 ) | عاطـــــل | ( 14 ) |
| على المعـــاش | ( 15 ) | ربة بيـــت | ( 16 ) |
| أخـــــــرى | ( 17 ) | تذكـــــر | |

١٣- ياترى بتشتغل فى المدينة ولا خارجها ؟ 

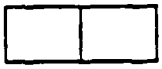
داخل المدينة ( 1 ) خارج المدينة ( 2 )

يذكر نوع العمل

١٤- ياترى لك عمل تانى غير عملك الأساسى ؟ 

نعـــم ( 1 ) لا ( 2 )

إذا كانت الإجابة بلا انتقل إلى سؤال ١٦ .

١٥- والعمل عبارة عن أيه ؟ 

( كود س ١٢ )

١٦- ودخلك من العمل قد أيه ؟ رقم حقيقى 

العمل الأساسى العمل الأضافى مجموع الدخل

## بيانات عن الاسرة المقيمة فى الوحدة السكنية

١٧- عايزين نعرف بيانات عن أسرتك ولادك وقرايبك اللى عايشين معاك

| م | الاسم | العلاقة بالأسرة (١) | النوع (٢) | السن (٣) | التعليم (٤) | العمل (٥) | الدخل (٦) | الحالة الاجتماعية (٧) | طبيعة العمل (٨) | ملاحظات |
|---|---|---|---|---|---|---|---|---|---|---|
| ١ | | | | | | | | | | |
| ٢ | | | | | | | | | | |
| ٣ | | | | | | | | | | |
| ٤ | | | | | | | | | | |
| ٥ | | | | | | | | | | |
| ٦ | | | | | | | | | | |
| ٧ | | | | | | | | | | |
| ٨ | | | | | | | | | | |
| ٩ | | | | | | | | | | |
| ١٠ | | | | | | | | | | |
| ١١ | | | | | | | | | | |
| ١٢ | | | | | | | | | | |
| اجمالى | | | | | | | | | | |

(١) العلاقة بالاسرة : زوج (١) زوجة (٢) ابن (٣) زوجة الابن (٤) زوج الابنة (٥)
حفيد(٦) قريب (٧) مجموعة زملاء (٨)

(٢) النوع . كود سؤال رقم ١ (٣) السن رقم حقيقى (٤) التعليم كود سؤال ٨ دون سن التعليم يأخذ كود ١٠

(٥) العمل . كود سؤال ١٢ طالب يأخذ كود (١٨) دون سن العمل كود (١٩)

(٦) الدخل رقم حقيقى

(٧) الحالة الاجتماعية : عازب (١) متزوج (٢) مطلق (٣) أرمل (٤) دون سن الزواج يأخذ كود (٥)

(٨) طبيعة العمل . نفس كود سؤال رقم ١١

١٨- نوع الاسرة ( لا يسأل )

نووية ( 1 )  ممتدة ( 2 )  مشتركة ( 3 )

مجموعة أقارب ( 4 )  مجموعة شباب ( 5 )

١٩- عدد أفراد الأسرة المقيمة ( لايسأل )

٢٠- اجمالى دخل الأسرة من العمل ( لايسأل )

٢١- نصيب الفرد من دخل الأسرة ( لايسأل )

$$= \frac{\text{اجمالى الدخـــل}}{\text{عدد أفراد الأسرة}}$$

**الظروف السكنية :**

٢٢- نوع البناء : اسكان سابق التجهيز ( 1 )

اسكان تقليـــــــدى ( 2 )

٢٣- نوعية الاسكان : ( لايسأل )

اسكان اقتصـــادى ( 1 )  اسكان متوسط ( 2 )

اسكان فوق المتوسط ( 3 )  اسكان عمالى ( 4 )

فيـــــــلا ( 5 )  سكن نواه ( 6 )

اسكان أهالـــــى ( 7 )

أخـــــــرى ( 8 )  تذكر

٢٤- عندكم كام حجرة : حجرة وصالة ( 1 ) 

٢ وصـــــالة ( 2 )

٣ وصـــــالة ( 3 )

٤ وصـــــالة ( 4 )

٥ فاكثـــــر ( 5 )

٢٥- ملكية السكن : تمليـــــك ( 1 ) ايجار ( 2 ) 

اسكان إدارى ( 3 ) استراحة ( 4 )

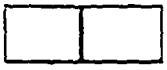
على حساب صاحب العمل ( 5 )

٢٦- القيمة الايجارية : ( يذكر رقم صحيح ) 

أ - قيمة الايجـــــــار

ب - قيمة السكن الادارى

جـ - قسط التمليـــــك

٢٧- التزاحم : (لا يسأل ) 

عدد أفراد الأسرة

عدد الحجرات + ١*

---

* صالة

TRANSLATION OF SURVEY FORM.

---

Name of Head of Household:-

Address:-

Head of Household Socio-Economic Data:-

---

1. Sex:
2. Age:
3. Nationality:
4. Religion:
5. Where did you live previously:
6. Why did you move to the Tenth of Ramadan City ?:
7. How many years have you been living here ?:
8. What is your marital status ?:
9. What education do you have ?:
10. What sector of employment are you in ?:
11. Where do you work ?:
12. What is your job ?:
13. Do you work inside or outside the Tenth of Ramadan City ?:
14. Do you have a second job ?: (If no go to question 16).
15. What is your second job ?:
16. How much is your income from your
    : main job.
    : second job

HOUSEHOLD SOCIO-ECONOMIC DATA:-

---

17. Who lives here ?: (name,relationship to head of household. sex, age, education, employment, income, marital status and remarks.)
18. Household type. (interviewer to complete).
19. Household size. (interviewer to complete).
20. Total household income. (interviewer to complete).
21. Share of income per person. (interviewer to complete).

HOUSEHOLD LIVING CONDITIONS.

---

22. Type of construction:
23. Type of Housing:
24. How many rooms do you have ?:
25. Type of Tenure:
26. Monthly tenure costs:
27. Occupancy rate rer room:

APPENDIX 5.

LEVEL TWO OF THE INVESTIGATION.

TORCHS Owners / Satisfaction criteria and preferences.

---

SAMPLE NO:

---

1. How many person live in this house ? _____

2. What is the age of the head of the household ? _____

   and the wife ? _____

   What is the age and sex of the eldest child ? _____

   and the youngest child ? _____

3. How many earners are there in the household ? _____

   How much does the head of the household earn per month ? _____

   How much do the other earners earn per month ? _____

4. When did you start living in this house ? _____

5. If there are any income generating activites ask the respondent about the approximate profit made out of it. _____

6. Approximatley how much did the construction of the extensions cost you ? _____

7. How do you feel about your house at its present state, please indicate whether you are:

   a. Satsified _____

   b. Neither satisfied nor dissatisfied _____

   c. Dissatisfied _____

8. What are the reasons behind your satisfaction and could you please rank them according to their significance ?

| Reasons. | Rank. |
|---|---|
| ---------- | ---------- |
| ---------- | ---------- |
| ---------- | ---------- |
| ---------- | ---------- |

9. What are the reasons behind your dissatisfaction and could please rank them according to their significance ?

| Reasons. | Rank. |
|---|---|
| ---------- | ---------- |
| ---------- | ---------- |
| ---------- | ---------- |
| ---------- | ---------- |

10. If all the following options were available at the same price what would you prefer and what would be your second choice ?
1. A 6 roomed house built of load bearing brick and timbe roof.

---

2. A 3 roomed house with a skeleton concrete structure with brick infill walls.

---

3. A 4 roomed house with two concrete roofed rooms and two timber roofed rooms.

---

11. If all the following options were available at the same price, what would you prefer and what would be your second choice ?

1. A 2 roomed house with finished interior and exterior.

---

2. A 3 roomed house with finished interior only.

---

3. A 3 roomed house with finished exterior only.

---

4. A 4 roomed house with no finishes.

---

12. If the following options were available at the same price, what would you prefer to have ?

a. A 3 roomed house with a shop.

---

b. A 4 roomed house without a shop.

---

13. If the following options were available at the same price, what would you prefer to have ?

a. A 3 roomed house with two free aspects ?

---

b. A 4 roomed house with only one free aspect ?

---

14. If the following options were available at the same price, what would you prefer to have ?

a. A 3 roomed house with a private garden ?

---

b. A 4 roomed house without a garden ?

---

15. The following questions are for the interviewer to fill in.

- number of floors: ----------

- number of rooms: ----------

- Methods & materialsof construction:

- Structural conditions:

good----- fair---- poor-----

- State of condition:

complete---- part complete ----- incomplete---

- Interior finishing:

  Finished----- Unfinished-----

- Exterior finishing:

  Finished----- Unfinished-----

- Plot area: sq. metres ------

- Area of open space within the plot: sq. metres ------

- In the case of existing income generating activities record relating information as far as possible, i.e if there is a shop what sort of goods and size of trade:

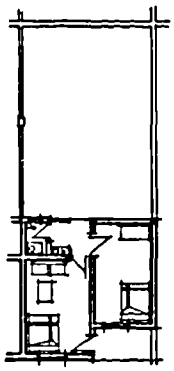
  ---

  ---

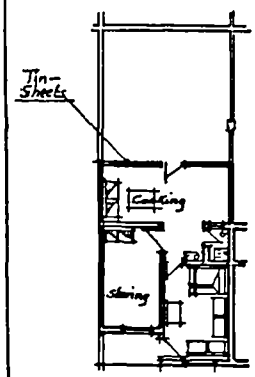
  ---

Appendix 6

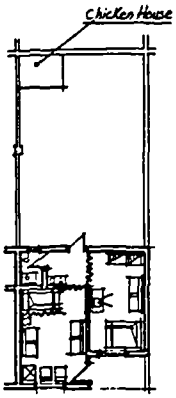
CASE(1) EID



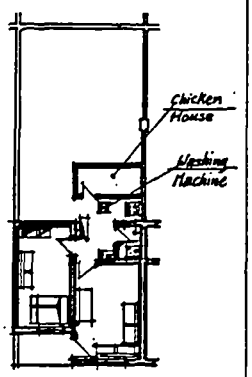
CASE(2) EGLAL



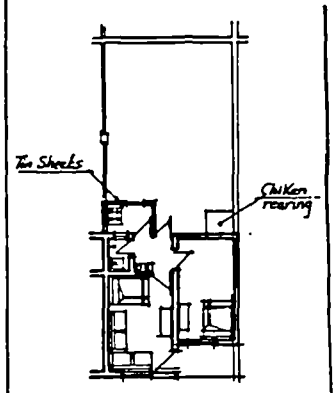

CASE(3) DANIAL



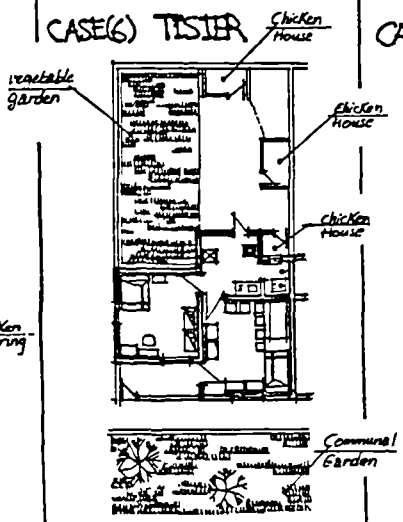

CASE (4) BAKR



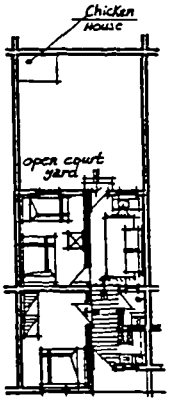

CASE(5) FOAD



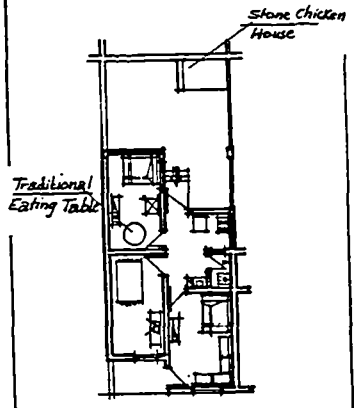

CASE(6) TISIER



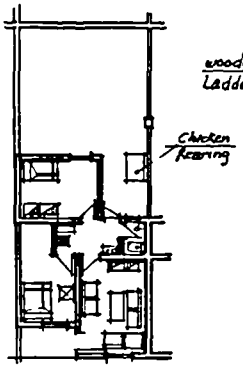

CASE(7) SAMIR



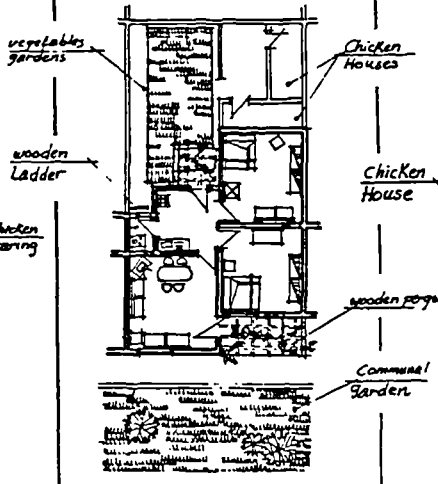

CASE(8) ASHOUR



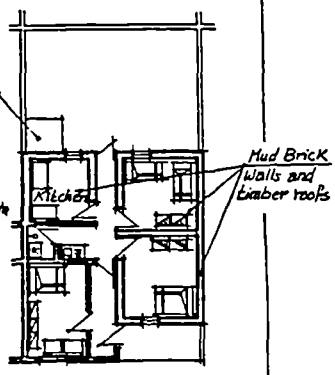

CASE(9) FIESAL



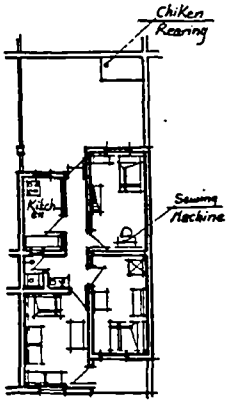

CASE (10) HISHAM



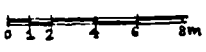

CASE(11) MOHANEDEEN



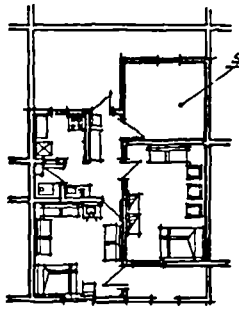

CASE(12) FATEH



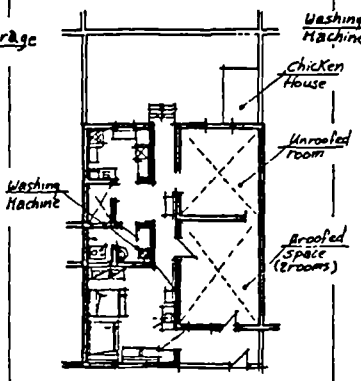

GROUP A, 2_4 ROOMS



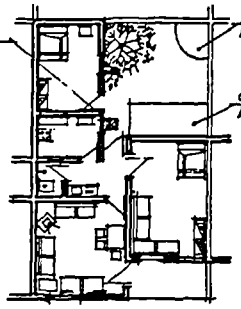
CASE (13) MORSI



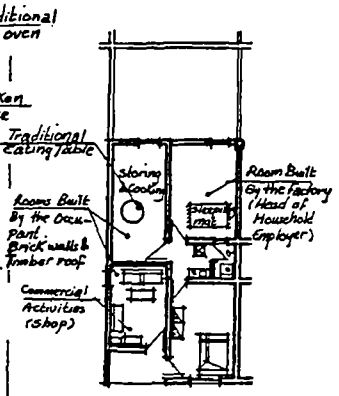

CASE (14) MAHFOUZ



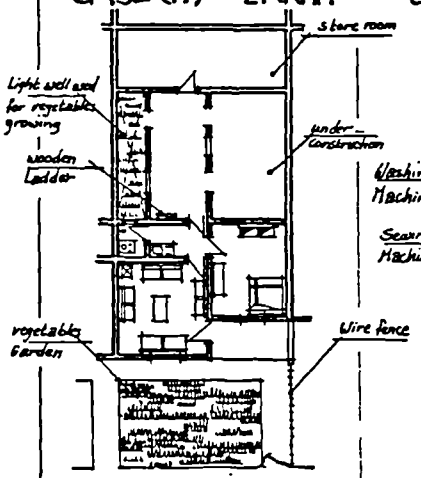

CASE (15) ANWAR



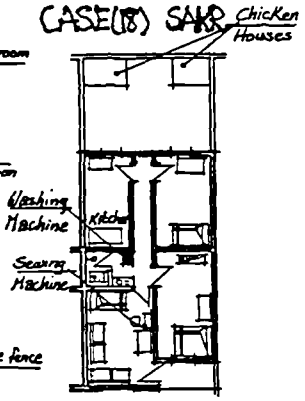

CASE (16) MOHEY




CASE (17) EKRAH

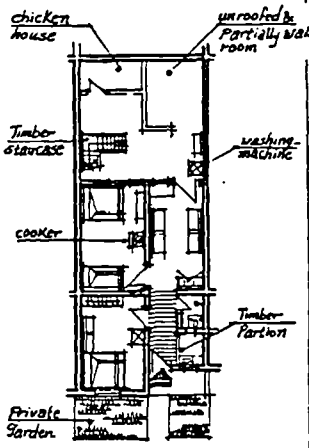



CASE (18) SAKR

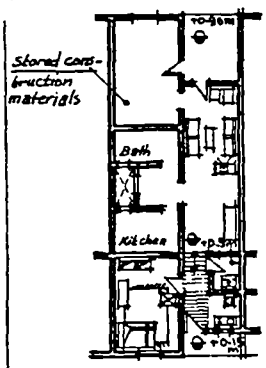



# GROUP A, 2-4 ROOMS

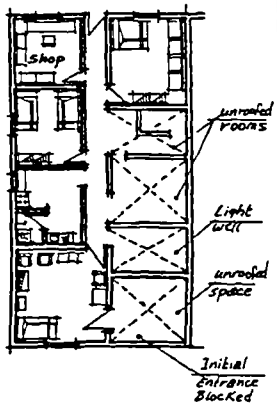
CASE (19) FEKRY



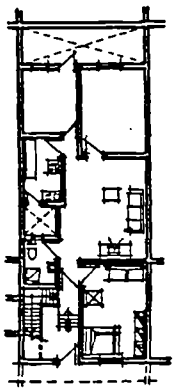

CASE (20) AMGAD




CASE (21) ATTIA

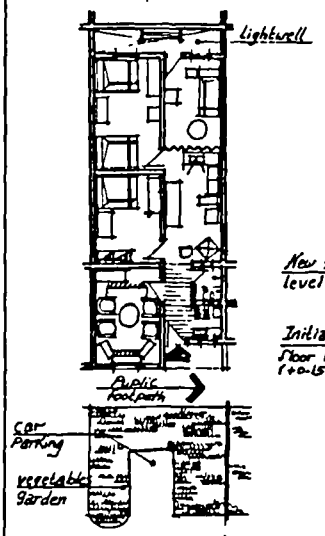



CASE (22) MONIER

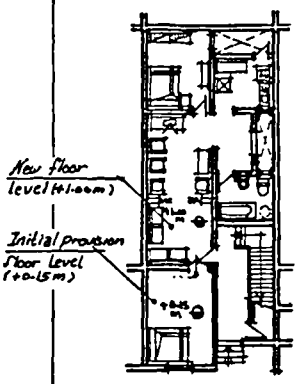


# GROUP A, 4-6 ROOMS

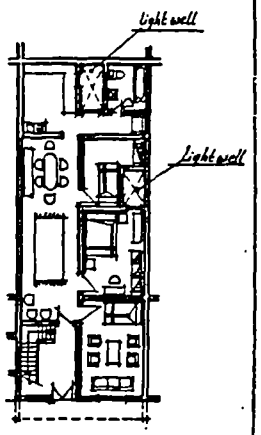
CASE (23) NAJEH



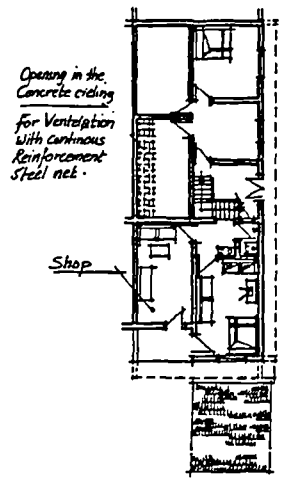

CASE (24) MONTASER



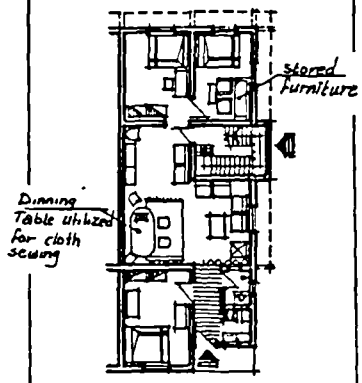

CASE (25) GAHGOOH



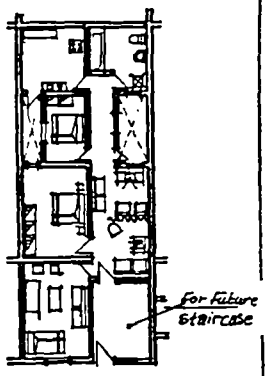

CASE (26) AMEER



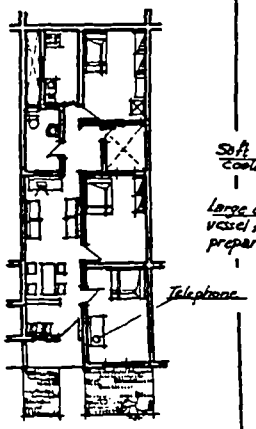

CASE (27) KAREM



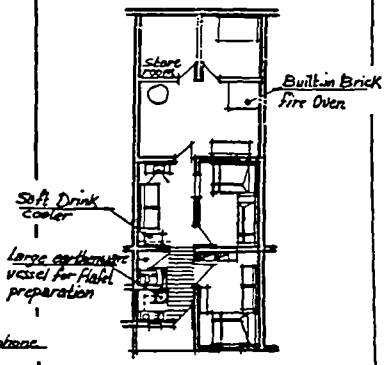

CASE (28) ROSTOM



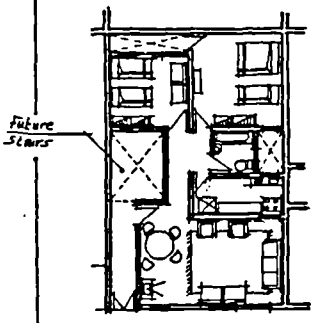

CASE (29) WALID



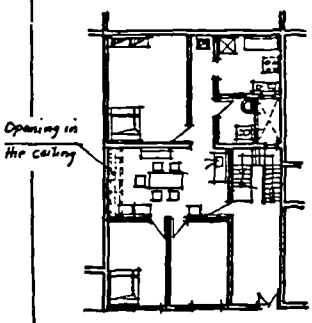

CASE (30) HASSANEEN



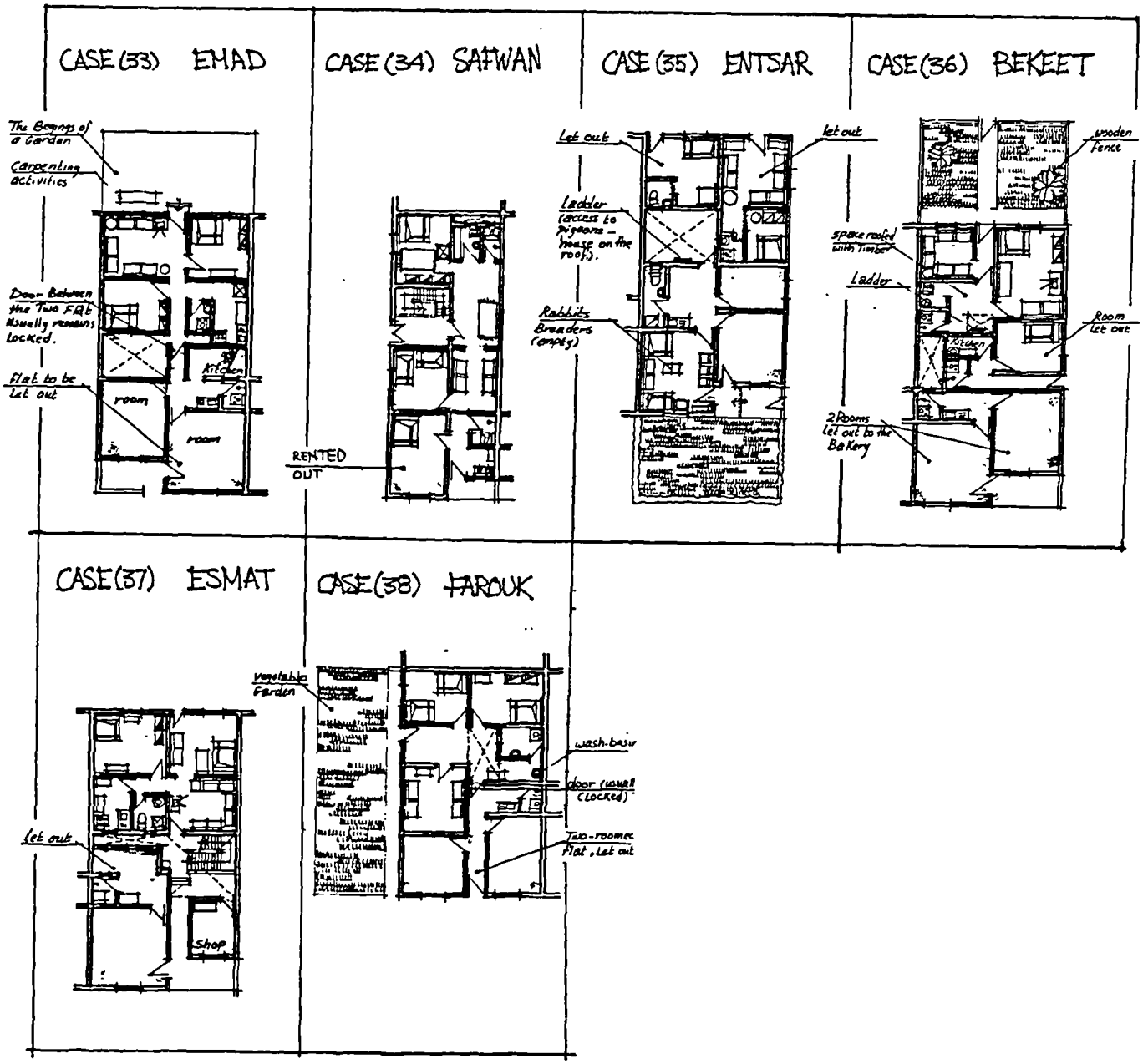

CASE (31) SERAG




CASE (32) MOSTAFA

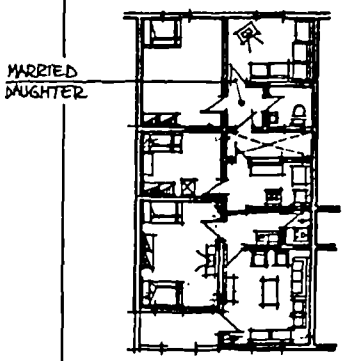



# GROUP A, 4-6 ROOMS

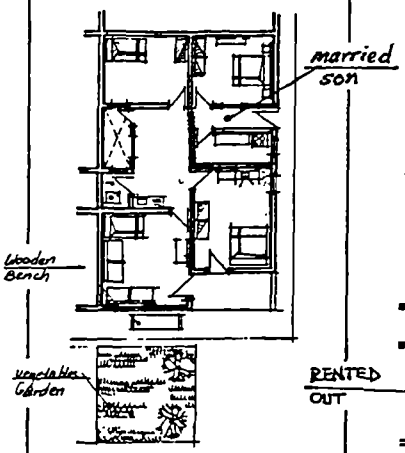



# GROUP B, 4-6 ROOMS (OWN ACCESS AND OWN FACILITIES).

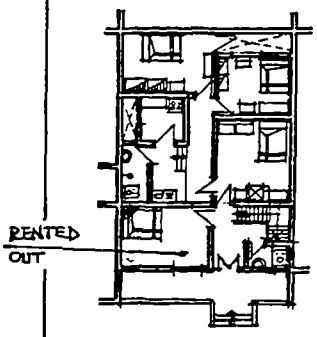
CASE (39) KIDR



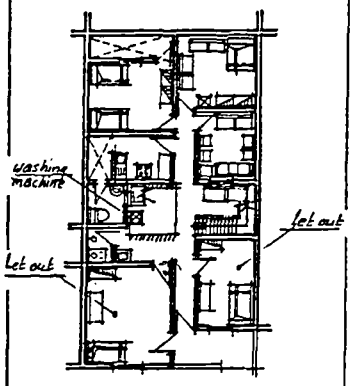

CASE (40) ABDEL HONIEM



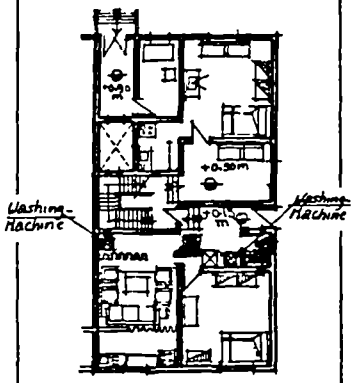

CASE (41) ZAGLOUL



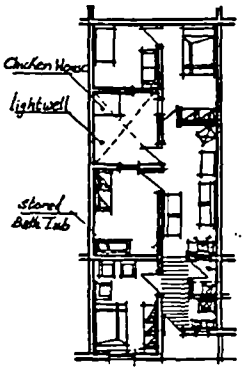

CASE (42) RAMY




CASE (43) TAHER

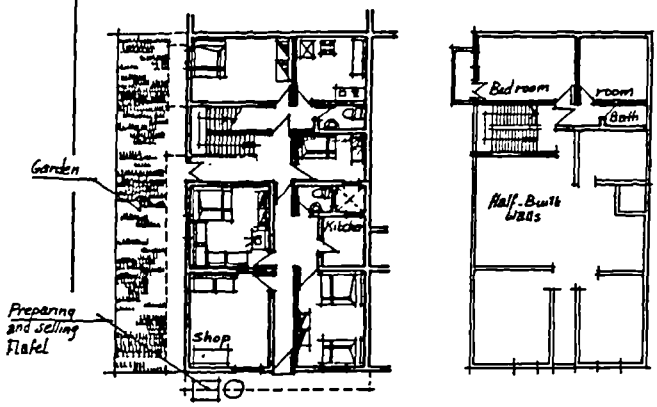



CASE (44) OMAR



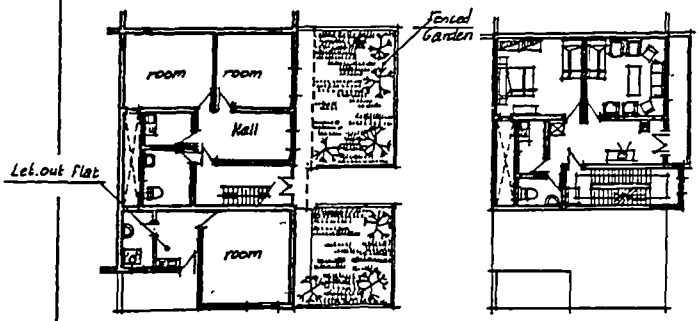

# GROUP B, 4-6 ROOMS (SHARED ACCESS OR FACILITIES

CASE (45) SAMHON



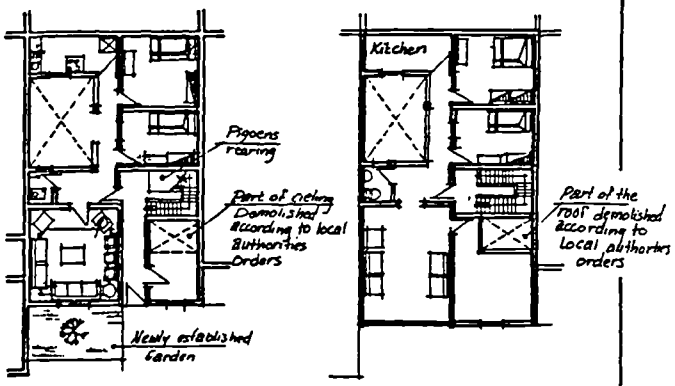

GROUND FLOOR 1ST FLOOR

CASE (46) SOBHI



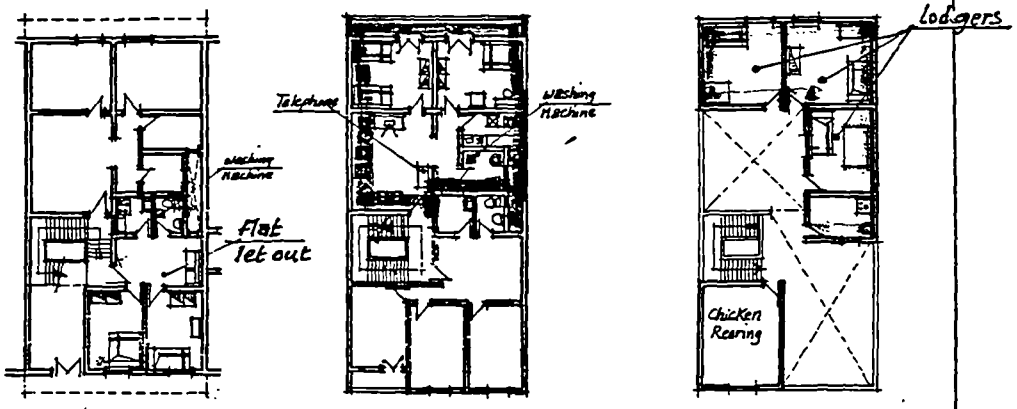

GROUND FLOOR 1ST. FLOOR

CASE (47) SAADON




GROUND FLOOR 1ST. FLOOR

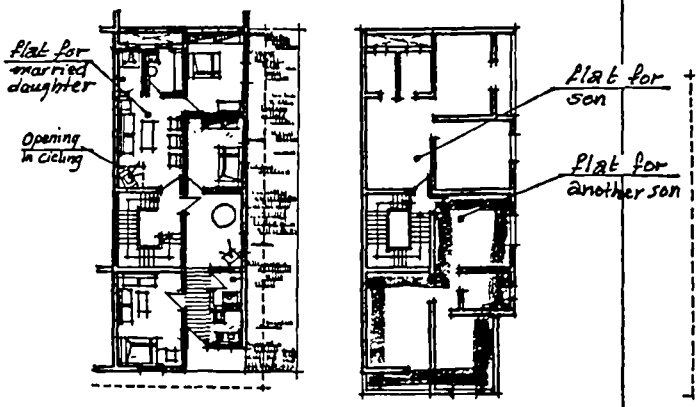
CASE (48) GERGES



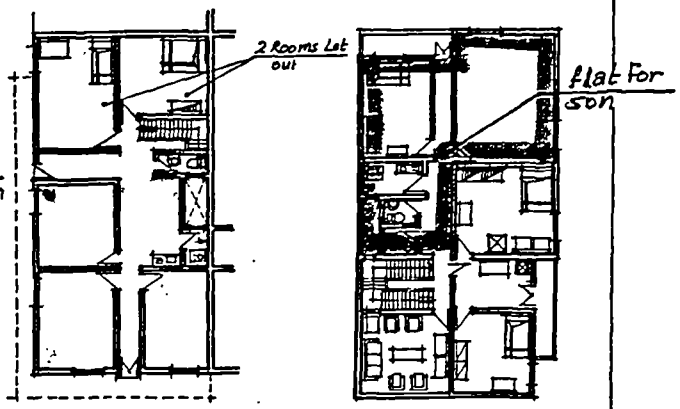

GROUND FLOOR 1ST FLOOR 2nd. FLOOR

# GROUP B. MORE THAN 6 ROOMS (OWN ACCESS AND FACILITIES)

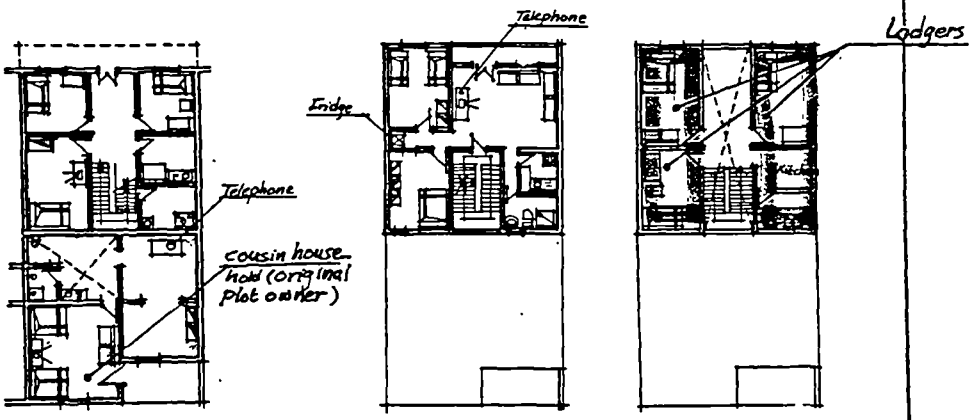
CASE (49) AHMED



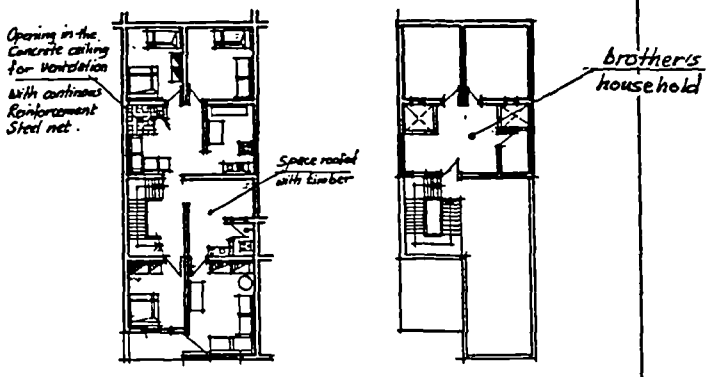

CASE (50) GHABOUR




CASE (51) SENAN

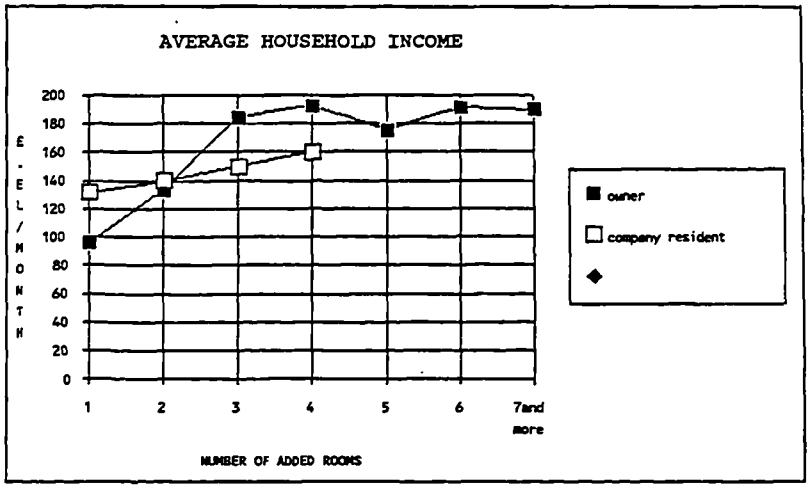


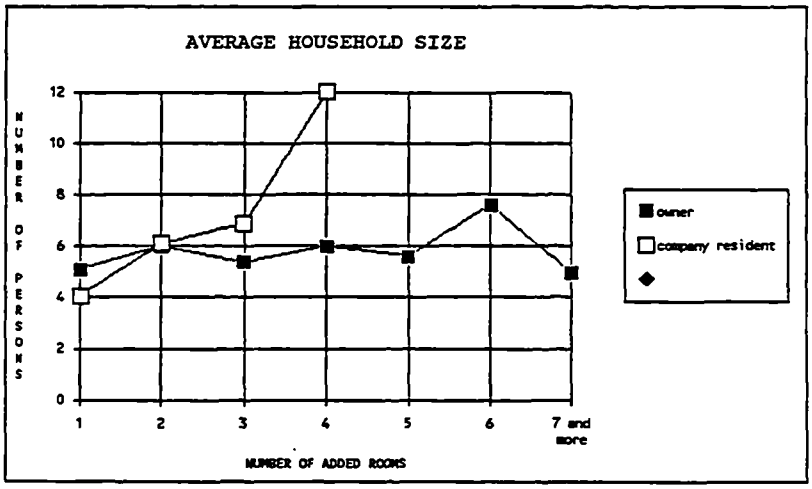

CASE (52) SAMEH

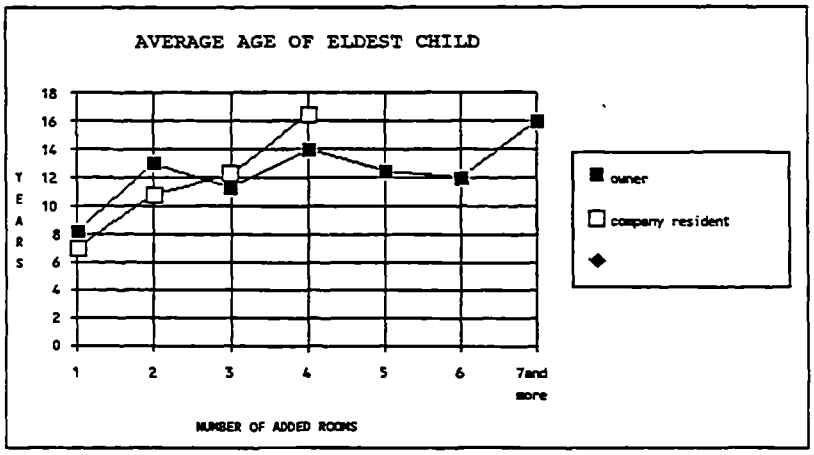


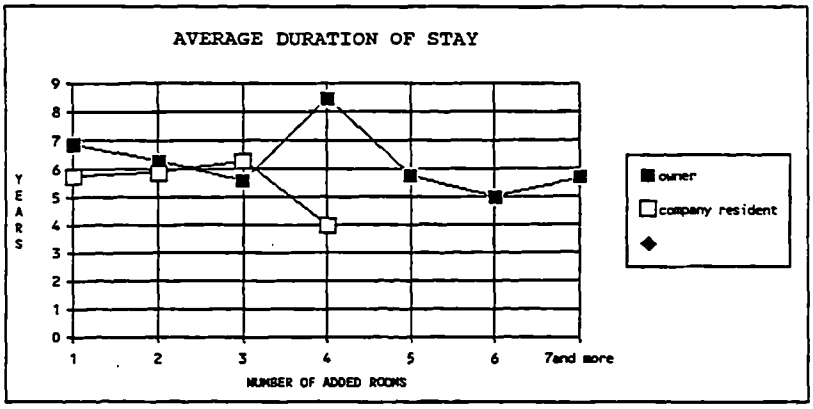

# GROUP B, MORE THAN 6 ROOMS (SHARED ACCESS OR FACILITIES).

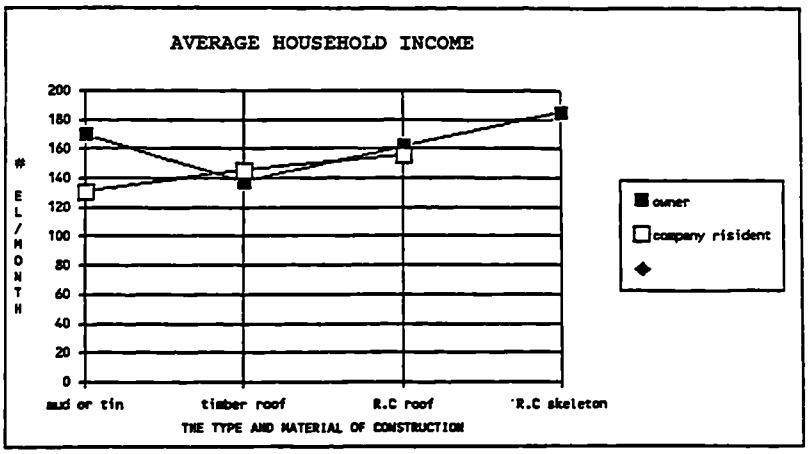
Appendix 7

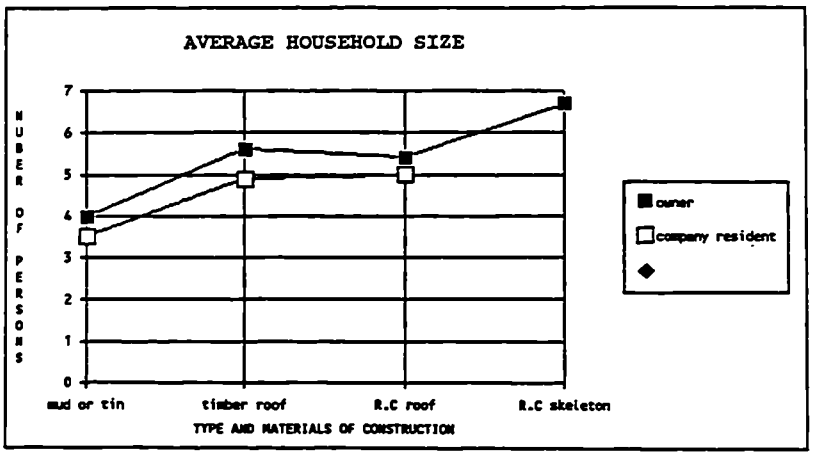

AVERAGE HOUSEHOLD INCOME
£ - E L / M O N T H
200
180
160
140
120
100
80
60
40
20
0
1
2
3
4
5
6
7and more
NUMBER OF ADDED ROOMS
owner
company resident

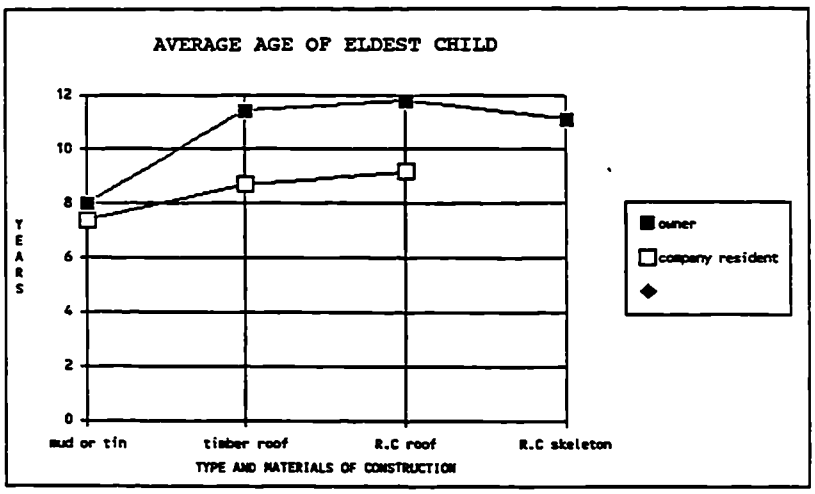

AVERAGE HOUSEHOLD SIZE
NUMBER OF PERSONS
12
10
8
6
4
2
0
1
2
3
4
5
6
7 and more
NUMBER OF ADDED ROOMS
owner
company resident

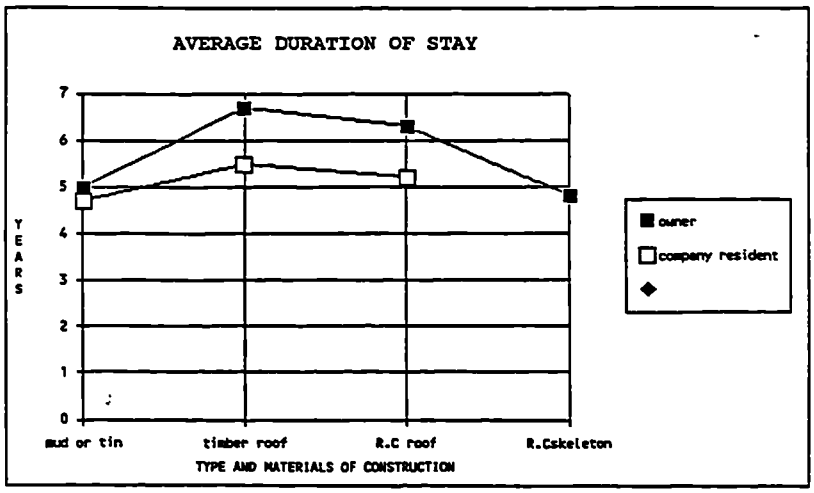

AVERAGE AGE OF ELDEST CHILD
YEARS
18
16
14
12
10
8
6
4
2
0
1
2
3
4
5
6
7and more
NUMBER OF ADDED ROOMS
owner
company resident


AVERAGE DURATION OF STAY
YEARS
9
8
7
6
5
4
3
2
1
0
1
2
3
4
5
6
7and more
NUMBER OF ADDED ROOMS
owner
company resident


AVERAGE HOUSEHOLD INCOME
# EL/MONTH
200
180
160
140
120
100
80
60
40
20
0
mud or tin
timber roof
R.C roof
R.C skeleton
THE TYPE AND MATERIAL OF CONSTRUCTION
owner
company risident


AVERAGE HOUSEHOLD SIZE
NUBER OF PERSONS
7
6
5
4
3
2
1
0
mud or tin
timber roof
R.C roof
R.C skeleton
TYPE AND MATERIALS OF CONSTRUCTION
owner
company resident


AVERAGE AGE OF ELDEST CHILD
YEARS
12
10
8
6
4
2
0
mud or tin
timber roof
R.C roof
R.C skeleton
TYPE AND MATERIALS OF CONSTRUCTION
owner
company resident


AVERAGE DURATION OF STAY
YEARS
7
6
5
4
3
2
1
0
mud or tin
timber roof
R.C roof
R.Cskeleton
TYPE AND MATERIALS OF CONSTRUCTION
owner
company resident